

**LEARNING ORGANIZATION, ORGANIZATIONAL
INNOVATIVENESS AND THE PERFORMANCE OF
SMALL AND MEDIUM ENTERPRISE
IN BANGKOK, THAILAND**

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BY

WORALUCK LALITSASIVIMOL

**Dissertation Submitted to
Othman Yeop Abdullah Graduate School of Business,
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ABSTRACT

This study investigated the relationship between learning organization, organizational innovativeness and the performance of small and medium enterprise (SME) in Bangkok, Thailand. Previous research found the learning organization and performance of large, medium and small firms to have significant positive relationships. However, little is known about the mediating effects of organizational innovativeness on learning organization and organizational performance relationships. Therefore, a gap remains in the empirical confirmation. In this study, the independent variables of learning organization included seven observed variables, namely continuous learning, inquiry and dialogue, team learning, embedded systems, system connection, empowerment and strategic leadership. The dependent variable was organizational performance. Organizational innovativeness acts as the mediator between learning organization constructs and organizational performance. The method of quantitative data collection was conducted by using mail surveys. A response rate of 39.2 per cent was obtained for the analysis of Thai SMEs throughout Bangkok. Structural Equation Modeling (SEM) was used with the Analysis of Moment Structures (AMOS) 18.0 to analyze the data. This study found four dimensions, namely continuous learning, embedded system, system connection and strategic leadership to have significant impacts on organizational innovativeness. Two dimensions, namely inquiry and dialogue, and team learning were found to have significant impacts on organizational performance. Organizational innovativeness has a significant impact on organizational performance. At the same time, organizational innovativeness also acts as the mediator between four dimensions of learning organization and organizational performance. The findings will assist SME owners and managers and government policy makers in learning efforts and in fostering innovativeness leading to superior performance.

Keywords: learning organization, organizational innovativeness, organizational performance, small and medium enterprise

ABSTRAK

Kajian ini mengkaji tentang hubungan antara organisasi pembelajaran, inovasi organisasi dan prestasi perusahaan kecil dan sederhana (PKS) di Bangkok, Thailand. Kajian sebelum ini mendapati bahawa organisasi pembelajaran dan prestasi perusahaan besar, sederhana dan kecil mempunyai hubungan positif yang ketara. Walau bagaimanapun, hanya sedikit sahaja yang diketahui tentang kesan pengantara inovasi kepada organisasi pembelajaran dan hubungan prestasi organisasi. Oleh itu, jurangnya masih kekal dalam pengesahan yang empirikal. Dalam kajian ini, pembolehubah bebas bagi organisasi pembelajaran termasuk tujuh pembolehubah bersandar yang diperhatikan iaitu, pembelajaran berterusan, siasatan dan dialog, pasukan pembelajaran, sistem terbenam, sambungan sistem, kepimpinan kuasa dan strategik. Pembolehubah bersandar ialah prestasi organisasi. Inovasi organisasi bertindak sebagai pengantara di antara membina organisasi pembelajaran dan prestasi organisasi. Kaedah pengumpulan data kuantitatif telah dijalankan dengan menggunakan kaedah kaji selidik mel elektronik. Kadar tindak balas sebanyak 39.2 peratus telah diperolehi bagi analisis PKS Thailand di seluruh Bangkok. Kaedah *Structural Equation Modeling (SEM)* telah digunakan dengan Analisis Struktur Moment (AMOS) 18.0 untuk menganalisis data. Kajian ini mendapati bahawa empat dimensi iaitu pembelajaran berterusan, sistem terbenam, sambungan sistem dan kepimpinan strategik mempunyai kesan ketara ke atas inovasi organisasi. Manakala dua dimensi iaitu siasatan dan dialog, dan pasukan pembelajaran didapati mempunyai impak yang ketara ke atas prestasi organisasi. Inovasi organisasi juga mempunyai impak yang ketara ke atas prestasi organisasi. Pada masa yang sama, inovasi organisasi juga bertindak sebagai pengantara di antara empat dimensi organisasi pembelajaran dan prestasi organisasi. Hasil kajian akan membantu pemilik dan pengurus PKS dan pembuat dasar kerajaan dalam usaha pembelajaran dan memupuk inovasi yang membawa kepada prestasi yang unggul.

Kata kunci: organisasi pembelajaran, inovasi organisasi, prestasi organisasi, perusahaan kecil dan sederhana

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LIST OF ABBREVIATIONS

| | |
|-------|---|
| SMEs | Small and Medium Enterprises |
| OSMEP | Office of Small and Medium Enterprises Promotion |
| ISMED | Institute of Small and Medium Enterprise Development |
| DLOQ | Dimensions of the Learning Organization Questionnaire |
| LO | Learning Organization |
| OI | Organizational Innovativeness |
| OP | Organizational Performance |
| CL | Continuous Learning |
| ID | Inquiry and Dialogue |
| TL | Team Learning |
| ES | Embedded System |
| EM | Empowerment |
| SC | System Connection |
| SL | Strategic Leadership |

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

The small and medium enterprises (SMEs) of Thailand are significant to its economy, which account, in total, for 99 percent of all enterprises. Therefore, it can be understood how critical they are in sustaining the development of the country and acting as a fundamental mechanism in promoting the revitalization and progress of the country's economy as well as contributing towards poverty alleviation (OSMEP, 2012). Moreover, most SMEs have systems and procedures which are relatively simple and flexible providing immediate response, a short decision-making process, better understanding and faster response to the needs of customers. In spite of these supporting characteristics, the SMEs face significant challenges in maintaining their competitiveness both domestically and globally. It is vital that SMEs leverage their competitive advantages against large multinational companies, whether they compete in existing markets or attempt to expand into new global markets (Porter, 1985).

In the 1990s, the Thai government came to the realization that for economic development, SMEs played a critical role with their potential to contribute toward improving the distribution of income, creating greater employment, reducing poverty, expanding exports and developing rural economy entrepreneurship and industry. Additionally, after the 1997, economic downturn revealed that SMEs

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Appendix A

Permission to Use the DLOQ

Dear, Prof. Watkins

I am a doctoral (DBA) student at the Universiti Utara Malaysia. I am currently working on my dissertation title "Learning Organization, Organizational Innovativeness and the Performance of Small and Medium Enterprises in Bangkok, Thailand". As I will be using the DLOQ for my dissertation, I wish to seek your permission to use the instrument of learning organization to gather survey data for my dissertation.

I would very much appreciate if you could kindly indicate your permissions by return this email.

Thank you for your considering this request and I am ready to respond to any questions you might have.

Sincerely yours,

Woraluck Lalitsasivimol
Student ID: 91361
Universiti Utara Malaysia
06010 UUM, Sintok
Kedah, Malaysia
Contract No: +6689-468-7408 (Mobile)

From:
"Karen Watkins" <kwatkins@uga.edu>
To: "jinny 2008" <jnny2008@yahoo.com>

We are happy to grant permission for you to use the DLOQ in your dissertation research. Please cite the survey as attached and include this citation in the survey you distribute. We would love to hear what you find out in your study.

Best wishes,

Karen E. Watkins, Professor
The University of Georgia
Department of Lifelong Education, Administration & Policy
406 River's Crossing
Athens, GA 30605

Dear, Prof. Marsick.

I am a doctoral (DBA) student at the Universiti Utara Malaysia. I am currently working on my dissertation title "Learning Organization, Organizational Innovativeness and the Performance of Small and Medium Enterprises in Bangkok, Thailand". As I will be using the DLOQ for my dissertation, I wish to seek your permission to use the instrument of learning organization to gather survey data for my dissertation.

I would very much appreciate if you could kindly indicate your permissions by return this email.

Thank you for your considering this request and I am ready to respond to any questions you might have.

Sincerely yours,

Woraluck Lalitsasivimol
Student ID: 91361
Universiti Utara Malaysia
06010 UUM, Sintok
Kedah, Malaysia
Contract No: +6689-468-7408 (Mobile)

From:
"Marsick, Victoria" <marsick@exchange.tc.columbia.edu>
To: "jinny 2008" <jnny2008@yahoo.com>

Hello,

We allow students to use the DLOQ without charge for their studies. I'm attaching a copy for your use. I'm also attaching the appropriate copyright information. Please let us know your study's results. Good luck with your studies.

Regards,

Prof Marsick

Appendix B

Cover Letter

Dear Respondents,

I am conducting a survey of owners or managers of SMEs in Thailand to gather the final information for my dissertation entitled "Learning Organization, Organizational Innovativeness and the Performance of Small and Medium Enterprises in Bangkok, Thailand". This research is being conducted as part of the requirements of Doctor of Business Administration at Universiti Utara Malaysia (UUM).

I would like to request your kind assistance in this academic study which endeavors to provide strategic comprehension for learning organization, organizational innovativeness and maintenance of organizational performance. I am confident that the result of my study will be beneficial for your organization and others who are interested in this topic.

I would greatly appreciate you taking the time and making the effort to carefully answer every item. There is no right or wrong answers. I assure you that you will remain completely anonymous.

Thank you very much for your kindness.

Yours sincerely,

For Universiti Utara Malaysia
Woraluck Lalitsasivimol
Student id: 91361
HP: +66894687408
Email: jnny2008@yahoo.com

Appendix C

Questionnaire

Learning Organization, Organizational Innovativeness and the Performance of Small and Medium Enterprises in Bangkok, Thailand

This questionnaire asks about your company's learning organization, innovativeness and Performance.

It should take no more than 10 to 15 minutes of your time to complete this questionnaire.

The questions have no right or wrong answers and only indicate your belief.

Please send the complete questionnaire back to the researcher by

If you have any questions about this questionnaire, please contact Woraluck Lalitsasivimol

Tel. (089) 468-7408

PART I (Demographic Information)

Please provide general information about you and your company. Please mark your response accurately.

1. Gender

Male []

Female []

2. Type of Business

Manufacturing []

Service []

Others (please indicate) []

3. Work Experience (in this organization)

Less than 5 years []

More than 5 but less than 7 years []

More than 7 but less than 9 years []

More than 9 years []

4. Position

Owner []

Manager []

Others (please indicate) []

5. Number of employees

1 - 50 []

51 - 200 []

More than 200 []

6. Age of Business

0 – 5 years []

6 – 10 years []

More than 10 years []

7. International Business

Yes []

No []

PART II (Dimensions of Learning Organization Questionnaires - DLOQ)

DLOQ is an instrument to measure the learning organization practices. For each statement below, please circle the number that indicates your agreement or disagreement about how it describes the learning organization practices of your company, ranging from 1 (Absolutely Disagree), 2 (Somewhat Disagree), 3 (Neither Agree nor Disagree), 4 (Somewhat Agree), and 5 (Absolutely Agree).

| | Questions | Absolutely Disagree | | Absolutely Agree | | |
|---|--|---------------------|---|------------------|---|---|
| 1 | In my organization, people help each other to learn. | 1 | 2 | 3 | 4 | 5 |
| 2 | In my organization, people take time to support learning. | 1 | 2 | 3 | 4 | 5 |
| 3 | In my organization, people are rewarded for learning. | 1 | 2 | 3 | 4 | 5 |
| 4 | In my organization, people give open and honest feedback to each other. | 1 | 2 | 3 | 4 | 5 |
| 5 | In my organization, whenever people state their view, they also ask what others think. | 1 | 2 | 3 | 4 | 5 |
| 6 | In my organization, people spend time building trust with each other. | 1 | 2 | 3 | 4 | 5 |
| 7 | In my organization, people have the freedom to adapt their goals as needed. | 1 | 2 | 3 | 4 | 5 |

| | Questions | Absolutely Disagree | | Absolutely Agree | | |
|----|--|---------------------|---|------------------|---|---|
| 8 | In my organization, people revise thinking as a result of organization discussions or information collected. | 1 | 2 | 3 | 4 | 5 |
| 9 | In my organization, we are confident that the organization will act on our recommendations. | 1 | 2 | 3 | 4 | 5 |
| 10 | My organization creates systems to measure gap between current and expected performance. | 1 | 2 | 3 | 4 | 5 |
| 11 | My organization makes its lessons learned available to all employees. | 1 | 2 | 3 | 4 | 5 |
| 12 | My organization measures the results of the time and resources spent on training and learning. | 1 | 2 | 3 | 4 | 5 |
| 13 | My organization recognizes people for taking initiative. | 1 | 2 | 3 | 4 | 5 |
| 14 | My organization gives people control over the resources they need to accomplish their work. | 1 | 2 | 3 | 4 | 5 |
| 15 | My organization supports members who take calculated risks. | 1 | 2 | 3 | 4 | 5 |
| 16 | My organization encourages people to think from a global perspective. | 1 | 2 | 3 | 4 | 5 |
| 17 | My organization works together with the outside community or other outside resources to meet mutual needs. | 1 | 2 | 3 | 4 | 5 |
| 18 | My organization encourages people to get answers from multiple locations and perspectives when solving problems. | 1 | 2 | 3 | 4 | 5 |
| 19 | In my organization, leaders mentor and coach those they lead. | 1 | 2 | 3 | 4 | 5 |
| 20 | In my organization, leaders continually look for opportunities to learn. | 1 | 2 | 3 | 4 | 5 |
| 21 | In my organization, leaders ensure that the organization's actions are consistent with its values. | 1 | 2 | 3 | 4 | 5 |

PART III (Organizational Innovativeness)

For each statement below, please circle the number that indicates your agreement or disagreement about how it describes the organizational innovativeness of your company, ranging from 1 (Absolutely Disagree), 2 (Somewhat Disagree), 3 (Neither Agree nor Disagree), 4 (Somewhat Agree), and 5 (Absolutely Agree).

| | Questions | Absolutely Disagree | | Absolutely Agree | | |
|----|--|---------------------|---|------------------|---|---|
| 1 | Management team dynamically searches for new ideas. | 1 | 2 | 3 | 4 | 5 |
| 2 | Program or project management eagerly accepts innovation. | 1 | 2 | 3 | 4 | 5 |
| 3 | Scientific innovation derived from study results is enthusiastically agreed to. | 1 | 2 | 3 | 4 | 5 |
| 4 | In this organization, innovation is considered excessively uncertain and is therefore denied. | 1 | 2 | 3 | 4 | 5 |
| 5 | Our firm is usually the first in the market to introduce new products and services. | 1 | 2 | 3 | 4 | 5 |
| 6 | Our customers always regard our newly-launched products and services as highly innovative. | 1 | 2 | 3 | 4 | 5 |
| 7 | In the past five years, our firm has launched more new products and services than our competitors. | 1 | 2 | 3 | 4 | 5 |
| 8 | Compared to our competitors, our firm gains less achievement in the introduction of new products and services. | 1 | 2 | 3 | 4 | 5 |
| 9 | We continue to better our business procedures. | 1 | 2 | 3 | 4 | 5 |
| 10 | Compared with our competitors, our firm alters the techniques of production more rapidly. | 1 | 2 | 3 | 4 | 5 |
| 11 | Our firm has improved several new approaches in management in the past five years. | 1 | 2 | 3 | 4 | 5 |

PART IV (Organizational Performance)

For each statement below, please circle the number that indicates your agreement or disagreement about how it describes the organizational performance comparison between year of 2011 and 2012 of your company, ranging from 1 (Absolutely Disagree), 2 (Somewhat Disagree), 3 (Neither Agree nor Disagree), 4 (Somewhat Agree), and 5 (Absolutely Agree).

| | Questions | <div style="display: flex; justify-content: space-between;"> Absolutely Disagree Absolutely Agree </div> | | | | |
|---|---|--|---|---|---|---|
| 1 | The investment return of my company is higher than that of the previous year. | 1 | 2 | 3 | 4 | 5 |
| 2 | The sales growth of my company is better than the year before. | 1 | 2 | 3 | 4 | 5 |
| 3 | Average productivity per staff of my company exceeds that of last year. | 1 | 2 | 3 | 4 | 5 |
| 4 | Time to market for products and services of my company is shorter than that of the previous year. | 1 | 2 | 3 | 4 | 5 |
| 5 | My company takes better care of customers' protests and requests than the year before. | 1 | 2 | 3 | 4 | 5 |
| 6 | The cost of each business transaction of my company is lower than that of the previous year. | 1 | 2 | 3 | 4 | 5 |
| 7 | Market share of my company is higher than that of the year before. | 1 | 2 | 3 | 4 | 5 |
| 8 | My company gains better profit volume than last year. | 1 | 2 | 3 | 4 | 5 |
| 9 | The additional fund of my company is higher than that of the previous year. | 1 | 2 | 3 | 4 | 5 |

**แบบสอบถามงานวิจัยเรื่อง: Learning Organization, Organizational Innovativeness and the
Performance of small and medium enterprises in Bangkok, Thailand.**

แบบสอบถามฉบับนี้ขอเรียนถามเกี่ยวกับการเป็นองค์กรแห่งการเรียนรู้ นวัตกรรมองค์กรรวมทั้งผลการดำเนินงานที่ผ่านมาของบริษัทท่าน

แบบสอบถามฉบับนี้จะใช้เวลาในการตอบประมาณ 10 – 15 นาที

คำถามเหล่านี้ไม่มีคำตอบที่ถูกต้องหรือผิด ผู้วิจัยเพียงต้องการทราบความคิดเห็นของท่านเท่านั้น

กรุณาตอบแบบสอบถามและส่งกลับคืนผู้วิจัยภายในวันที่ _____ จะเป็นพระคุณยิ่ง

หากท่านมีข้อสงสัยเกี่ยวกับแบบสอบถาม กรุณาติดต่อ คุณวรลักษณ์ ลลิตศิริวิมล โทรศัพท์ (089) 468-7408

ส่วนที่ 1 ข้อมูลทั่วไป

โปรดตอบคำถามเกี่ยวกับตัวท่านและบริษัทของท่าน กรุณาทำเครื่องหมายสำหรับคำตอบที่ถูกต้องที่สุด

1. เพศ

ชาย []

หญิง []

2. ประเภทของธุรกิจ

การผลิต []

บริการ []

อื่นๆ (โปรดระบุ) []

3. ประสบการณ์ทำงาน (ในองค์กรปัจจุบัน)

น้อยกว่า 5 ปี []

มากกว่า 5 ปี แต่น้อยกว่า 7 ปี []

มากกว่า 7 ปี แต่น้อยกว่า 9 ปี []

มากกว่า 9 ปี []

4. ตำแหน่งงาน

เจ้าของกิจการ []

ผู้จัดการ []

อื่นๆ (โปรดระบุ) []

5. จำนวนพนักงานบริษัท

1 – 50 คน []

51 – 200 คน []

มากกว่า 200 คน []

6. อายุของธุรกิจ

- 0 – 5 ปี ()
- 6 – 10 ปี ()
- มากกว่า 10 ปี ()

7. ประกอบธุรกิจระหว่างประเทศ

- ใช่ ()
- ไม่ใช่ ()

ส่วนที่ 2 ปัจจัยแวดล้อมที่มีผลต่อการเป็นองค์กรแห่งการเรียนรู้ (DLOQ)

DLOQ เป็นเครื่องมือวัดวิธีปฏิบัติการเป็นองค์กรแห่งการเรียนรู้
กรุณาเลือกตัวเลขที่ตรงกับความเห็นของท่านมากที่สุด ในแต่ละข้อความที่อธิบายวิธีปฏิบัติการเป็นองค์กรแห่ง
การเรียนรู้ของบริษัทท่าน ตั้งแต่ 1 (ไม่เห็นด้วยอย่างยิ่ง), 2 (ค่อนข้างไม่เห็นด้วย), 3 (เฉยๆ), 4 (ค่อนข้างเห็นด้วย),
5 (เห็นด้วยอย่างยิ่ง)

| | ข้อคำถาม | ไม่เห็นด้วย อย่างยิ่ง | | | เห็นด้วย อย่างยิ่ง | |
|---|---|--------------------------|---|---|-----------------------|---|
| 1 | คนในองค์กรของฉันมักจะช่วยกันและกันในการเรียนรู้เรื่องต่างๆ | 1 | 2 | 3 | 4 | 5 |
| 2 | คนในองค์กรของฉันมักจะให้เวลากับการสนับสนุนการเรียนรู้ | 1 | 2 | 3 | 4 | 5 |
| 3 | องค์กรของฉันมักจะให้รางวัลกับคนที่มีการเรียนรู้ | 1 | 2 | 3 | 4 | 5 |
| 4 | คนในองค์กรของฉัน มักจะให้ความคิดเห็นที่จริงใจ และ ตรงไปตรงมาแก่กันและกัน | 1 | 2 | 3 | 4 | 5 |
| 5 | เมื่อคนในองค์กรของฉันแสดงมุมมองของตน เขามักจะถามความ คิดเห็นของผู้อื่นต่อเรื่องนั้นๆเสมอ | 1 | 2 | 3 | 4 | 5 |
| 6 | คนในองค์กรของฉันมักให้เวลากับการสร้างความไว้วางใจซึ่งกัน | 1 | 2 | 3 | 4 | 5 |
| 7 | คนในองค์กรของฉันมีอิสระในการปรับเป้าหมายของตนได้ตาม ความต้องการ | 1 | 2 | 3 | 4 | 5 |

| | ข้อคำถาม | ไม่เห็นด้วย อย่างยิ่ง | | เห็นด้วย อย่างยิ่ง | | |
|----|--|--------------------------|---|-----------------------|---|---|
| 8 | คนในองค์กรของฉันพร้อมที่จะแก้ไขความคิดของตนเอง หลังจากการอภิปรายกันในภายในองค์กร หรือได้รับข้อมูลใหม่ๆ | 1 | 2 | 3 | 4 | 5 |
| 9 | คนในองค์กรของฉันมีความมั่นใจว่า องค์กรจะปฏิบัติตามคำแนะนำของเขา | 1 | 2 | 3 | 4 | 5 |
| 10 | องค์กรของฉันได้สร้างระบบประเมินผลที่สามารถเปรียบเทียบระหว่างผลการปฏิบัติงานจริงของพนักงานกับผลการปฏิบัติงานที่องค์กรคาดหวังได้ | 1 | 2 | 3 | 4 | 5 |
| 11 | องค์กรของฉันเปิดโอกาสให้พนักงานทุกคนสามารถเรียนรู้จากองค์ความรู้ขององค์กรได้ | 1 | 2 | 3 | 4 | 5 |
| 12 | องค์กรของฉันมีการประเมินความคุ้มค่าของเวลาที่ใช้ไปกับการอบรมและการเรียนรู้ของพนักงาน | 1 | 2 | 3 | 4 | 5 |
| 13 | องค์กรของฉันให้ความสำคัญกับผู้ที่มีความคิดริเริ่ม | 1 | 2 | 3 | 4 | 5 |
| 14 | องค์กรของฉันให้อำนาจแก่คนในองค์กร ในการใช้ทรัพยากรขององค์กรที่จำเป็นต่อการเรียนรู้ | 1 | 2 | 3 | 4 | 5 |
| 15 | องค์กรของฉันให้การสนับสนุนแก่ผู้ที่กล้ารับความเสี่ยงที่คาดว่าจะเกิดขึ้น | 1 | 2 | 3 | 4 | 5 |
| 16 | องค์กรของฉันสนับสนุนให้คนมองสิ่งต่างๆ อย่างรอบด้าน | 1 | 2 | 3 | 4 | 5 |
| 17 | องค์กรของฉันทำงานร่วมกับชุมชน และองค์กรอื่นๆ เพื่อให้สามารถบรรลุวัตถุประสงค์ร่วมกันได้ | 1 | 2 | 3 | 4 | 5 |
| 18 | องค์กรของฉันสนับสนุนให้คนแก้ไขปัญหา โดยหาคำตอบจากหลายแหล่ง และ หลายมุมมอง | 1 | 2 | 3 | 4 | 5 |
| 19 | ในองค์กรของฉันผู้นำ จะเป็นผู้ให้คำชี้แนะ และ สั่งสอนผู้ได้บังคับบัญชา | 1 | 2 | 3 | 4 | 5 |
| 20 | ในองค์กรของฉันผู้นำจะมองหาโอกาสในการเรียนรู้สิ่งใหม่ๆ อยู่เสมอ | 1 | 2 | 3 | 4 | 5 |
| 21 | ในองค์กรของฉันผู้นำจะทำให้มั่นใจว่ากิจกรรมต่างๆ ที่จัดขึ้นมีความเหมาะสมแก่คุณค่าขององค์กร | 1 | 2 | 3 | 4 | 5 |

ส่วนที่ 3 นวัตกรรมองค์กร

กรุณาเลือกตัวเลขที่ตรงกับความเห็นของท่านมากที่สุด ในแต่ละข้อความที่อธิบายความเป็นนวัตกรรมองค์กรของบริษัทท่าน ตั้งแต่ 1 (ไม่เห็นด้วยอย่างยิ่ง), 2 (ค่อนข้างไม่เห็นด้วย), 3 (เฉยๆ), 4 (ค่อนข้างเห็นด้วย), 5 (เห็นด้วยอย่างยิ่ง)

| | ข้อคำถาม | ไม่เห็นด้วย อย่างยิ่ง | | | | | เห็นด้วย อย่างยิ่ง | | | | |
|----|--|--------------------------|---|---|---|---|-----------------------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 1 | การบริหารอย่างกระตือรือร้นมักค้นหาความคิดสร้างสรรค์สิ่งใหม่ๆ | 1 | 2 | 3 | 4 | 5 | | | | | |
| 2 | โครงการนวัตกรรมหรือการจัดการแผนงานได้ถูกยอมรับทันที | 1 | 2 | 3 | 4 | 5 | | | | | |
| 3 | บนพื้นฐานจากผลของการวิจัย นวัตกรรมทางวิทยาศาสตร์ได้ถูกยอมรับในทันที | 1 | 2 | 3 | 4 | 5 | | | | | |
| 4 | ในองค์กรของฉัน นวัตกรรมในหน่วยธุรกิจได้ถูกรับรู้ว่ามีค่า ไม่แน่นอนและมักได้รับการปฏิเสธ | 1 | 2 | 3 | 4 | 5 | | | | | |
| 5 | บริษัทของเรามักจะเป็นผู้นำในการออกสู่ตลาดอยู่บ่อยๆ ในการ แนะนำสินค้าหรือบริการใหม่ๆ | 1 | 2 | 3 | 4 | 5 | | | | | |
| 6 | ลูกค้าของเรามักจะรับรู้ถึงสินค้าและบริการใหม่ของเรา เป็นสิ่ง ที่ใหม่มากบ่อยๆ | 1 | 2 | 3 | 4 | 5 | | | | | |
| 7 | ใน 5 ปีที่ผ่านมา บริษัทของเรามีการแนะนำสินค้าและบริการ ที่สร้างสรรค์มากกว่าคู่แข่ง | 1 | 2 | 3 | 4 | 5 | | | | | |
| 8 | เมื่อเปรียบเทียบกับคู่แข่ง บริษัทของเรามีอัตราความสำเร็จ ที่ต่ำกว่าในการออกสินค้าและบริการใหม่ๆ | 1 | 2 | 3 | 4 | 5 | | | | | |
| 9 | เราได้มีการปรับปรุงกระบวนการทางธุรกิจของเราอย่างต่อเนื่อง | 1 | 2 | 3 | 4 | 5 | | | | | |
| 10 | เมื่อเปรียบเทียบกับคู่แข่ง บริษัทของเราได้เปลี่ยนแปลงวิธีการ ผลิตที่รวดเร็วดีมาก | 1 | 2 | 3 | 4 | 5 | | | | | |
| 11 | บริษัทของเราได้มีการพัฒนาวิธีการบริหารงานใหม่ๆมากมายใน ระหว่าง 5 ปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |

ส่วนที่ 4 ผลการดำเนินงานขององค์กร

กรุณาลืออตัวเลอที่ตรงกับความเห็นของท่านมากที่สุด ในแต่ละข้อความที่อธิบายการปรับปรุงผลการดำเนินงาน
เปรียบเทียบระหว่างปี 2554 กับปี 2555 ของบริษัทท่าน
ตั้งแต่ 1 (ไม่เห็นด้วยอย่างยิง), 2 (ค่อนข้างไม่เห็นด้วย), 3 (เฉยๆ), 4 (ค่อนข้างเห็นด้วย), 5 (เห็นด้วยอย่างยิง)

| | ข้อคำถาม | ไม่เห็นด้วย อย่างยิง | | | | | เห็นด้วย อย่างยิง | | | | |
|---|---|-------------------------|---|---|---|---|----------------------|--|--|--|--|
| 1 | ผลตอบแทนจากการลงทุนในองค์กรของฉฉในปฉนี้สูงกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 2 | อัตราการเติบโตของยอดขายในองค์กรของฉฉในปฉนี้ดีกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 3 | ผลิตผลต่อจำนวนพนักงานในองค์กรของฉฉในปฉนี้สูงกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 4 | เวลาที่ใช้ในการกระจายสินค้าสู่ตลาดในองค์กรของฉฉน้อยกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 5 | องค์กรของฉฉการดูแลเอาใจใส่ต่อคำร้องเรียน/ความต้องการของลูกค้ามากกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 6 | ต้นทุนต่อช่องทางดำเนินธุรกิจใองค์กรของฉฉน้อยกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 7 | ส่วนแบ่งทางการตลาดใองค์กรของฉฉสูงกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 8 | องค์กรของฉฉได้รับปริมาณผลกำไรใการทำธุรกิจมากกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |
| 9 | เงินทุนที่เพิ่มขึ้นใการทำธุรกิจใองค์กรของฉฉดีกว่าปีที่ผ่านมา | 1 | 2 | 3 | 4 | 5 | | | | | |

Appendix D

Chi-square Value

| df | p=0.05 | p=0.01 | p=0.001 |
|-----------|---------------|---------------|----------------|
| 1 | 3.84 | 6.64 | 10.83 |
| 2 | 5.99 | 9.21 | 13.82 |
| 3 | 7.82 | 11.35 | 16.27 |
| 4 | 9.49 | 13.28 | 18.47 |
| 5 | 11.07 | 15.09 | 20.52 |
| 6 | 12.59 | 16.81 | 22.46 |
| 7 | 14.07 | 18.48 | 24.32 |
| 8 | 15.51 | 20.09 | 26.13 |
| 9 | 16.92 | 21.67 | 27.88 |
| 10 | 18.31 | 23.21 | 29.59 |
| 11 | 19.68 | 24.73 | 31.26 |
| 12 | 21.03 | 26.22 | 32.91 |
| 13 | 22.36 | 27.69 | 34.53 |
| 14 | 23.69 | 29.14 | 36.12 |
| 15 | 25.00 | 30.58 | 37.70 |
| 16 | 26.30 | 32.00 | 39.25 |
| 17 | 27.59 | 33.41 | 40.79 |
| 18 | 28.87 | 34.81 | 42.31 |
| 19 | 30.14 | 36.19 | 43.82 |
| 20 | 31.41 | 37.57 | 45.32 |
| 21 | 32.67 | 38.93 | 46.80 |
| 22 | 33.92 | 40.29 | 48.27 |
| 23 | 35.17 | 41.64 | 49.73 |
| 24 | 36.42 | 42.98 | 51.18 |
| 25 | 37.65 | 44.31 | 52.62 |
| 26 | 38.89 | 45.64 | 54.05 |
| 27 | 40.11 | 46.96 | 55.48 |
| 28 | 41.34 | 48.28 | 56.89 |
| 29 | 42.56 | 49.59 | 58.30 |
| 30 | 43.77 | 50.89 | 59.70 |
| 31 | 44.99 | 52.19 | 61.10 |
| 32 | 46.19 | 53.49 | 62.49 |
| 33 | 47.40 | 54.78 | 63.87 |
| 34 | 48.60 | 56.06 | 65.25 |
| 35 | 49.80 | 57.34 | 66.62 |
| 36 | 51.00 | 58.62 | 67.99 |
| 37 | 52.19 | 59.89 | 69.35 |
| 38 | 53.38 | 61.16 | 70.71 |
| 39 | 54.57 | 62.43 | 72.06 |
| 40 | 55.76 | 63.69 | 73.41 |
| 41 | 56.94 | 64.95 | 74.75 |
| 42 | 58.12 | 66.21 | 76.09 |

Appendix E

Missing Data

Missing Data

| | Cases | | | | | |
|------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| CL1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| CL2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| CL3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ID1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ID2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ID3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| TL1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| TL2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| TL3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ES1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ES2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| ES3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| EM1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| EM2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| EM3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SC1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SC2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SC3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SL1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SL2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| SL3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI4 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI5 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI6 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI7 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI8 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI9 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI10 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OI11 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP1 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP2 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP3 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP4 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP5 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP6 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP7 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP8 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |
| OP9 | 398 | 100.0% | 0 | 0.0% | 398 | 100.0% |

Appendix F

Descriptive Statistics of Variables

Gender

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Male | 280 | 71.4 | 71.4 | 71.4 |
| Valid Female | 112 | 28.6 | 28.6 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Type of Business

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------|-----------|---------|---------------|--------------------|
| Manufacturing | 216 | 55.1 | 55.1 | 55.1 |
| Valid Service | 176 | 44.9 | 44.9 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Experience

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|-----------|---------|---------------|--------------------|
| More than 5 but less than 7 years | 109 | 27.8 | 27.8 | 27.8 |
| Valid More than 7 but less than 9 years | 153 | 39.0 | 39.0 | 66.8 |
| More than 9 years | 130 | 33.2 | 33.2 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Position

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------|-----------|---------|---------------|--------------------|
| Owner | 272 | 69.4 | 69.4 | 69.4 |
| Valid Manager | 120 | 30.6 | 30.6 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Number of Employees

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------|-----------|---------|---------------|--------------------|
| 1 - 50 | 40 | 10.2 | 10.2 | 10.2 |
| Valid 51 - 200 | 352 | 89.8 | 89.8 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Age of Business

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------------|-----------|---------|---------------|--------------------|
| 6 – 10 years | 180 | 45.9 | 45.9 | 45.9 |
| Valid More than 10 years | 212 | 54.1 | 54.1 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

International Business

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------|-----------|---------|---------------|--------------------|
| Yes | 207 | 52.8 | 52.8 | 52.8 |
| Valid No | 185 | 47.2 | 47.2 | 100.0 |
| Total | 392 | 100.0 | 100.0 | |

Appendix G

Assessment of Normality

| | N | Minimum | Maximum | Mean | Std. Deviation |
|-----------------------|-----|----------|---------|------|-------------------|
| Zscore: CL1 | 392 | -1.65532 | 1.23504 | 0E-7 | 1.00000000 |
| Zscore: CL2 | 392 | -1.64301 | 1.44601 | 0E-7 | 1.00000000 |
| Zscore: CL3 | 392 | -1.68649 | 1.35307 | 0E-7 | 1.00000000 |
| Zscore: ID1 | 392 | -1.79653 | 1.35796 | 0E-7 | 1.00000000 |
| Zscore: ID2 | 392 | -1.86912 | 1.46890 | 0E-7 | 1.00000000 |
| Zscore: ID3 | 392 | -1.86111 | 1.40312 | 0E-7 | 1.00000000 |
| Zscore: TL1 | 392 | -1.70790 | 1.35266 | 0E-7 | 1.00000000 |
| Zscore: TL2 | 392 | -1.84325 | 1.30171 | 0E-7 | 1.00000000 |
| Zscore: TL3 | 392 | -1.76319 | 1.33276 | 0E-7 | 1.00000000 |
| Zscore: ES1 | 392 | -1.85586 | 1.38828 | 0E-7 | 1.00000000 |
| Zscore: ES2 | 392 | -1.91680 | 1.38599 | 0E-7 | 1.00000000 |
| Zscore: ES3 | 392 | -1.90858 | 1.28529 | 0E-7 | 1.00000000 |
| Zscore: EM1 | 392 | -1.90925 | 1.34478 | 0E-7 | 1.00000000 |
| Zscore: EM2 | 392 | -1.94689 | 1.32506 | 0E-7 | 1.00000000 |
| Zscore: EM3 | 392 | -1.91108 | 1.30758 | 0E-7 | 1.00000000 |
| Zscore: SC1 | 392 | -1.46387 | 1.32852 | 0E-7 | 1.00000000 |
| Zscore: SC2 | 392 | -1.46312 | 1.51246 | 0E-7 | 1.00000000 |
| Zscore: SC3 | 392 | -1.63737 | 1.27022 | 0E-7 | 1.00000000 |
| Zscore: SL1 | 392 | -1.79581 | 1.24504 | 0E-7 | 1.00000000 |
| Zscore: SL2 | 392 | -1.87530 | 1.29331 | 0E-7 | 1.00000000 |
| Zscore: SL3 | 392 | -1.87973 | 1.29979 | 0E-7 | 1.00000000 |
| Zscore: OI1 | 392 | -1.90333 | 1.36906 | 0E-7 | 1.00000000 |
| Zscore: OI2 | 392 | -1.92605 | 1.29361 | 0E-7 | 1.00000000 |
| Zscore: OI3 | 392 | -1.90289 | 1.34736 | 0E-7 | 1.00000000 |
| Zscore: OI4 | 392 | -1.97785 | 1.30391 | 0E-7 | 1.00000000 |
| Zscore: OI5 | 392 | -1.87769 | 1.32952 | 0E-7 | 1.00000000 |
| Zscore: OI6 | 392 | -1.94521 | 1.32742 | 0E-7 | 1.00000000 |
| Zscore: OI7 | 392 | -1.91575 | 1.34936 | 0E-7 | 1.00000000 |
| Zscore: OI8 | 392 | -1.99262 | 1.43705 | 0E-7 | 1.00000000 |
| Zscore: OI9 | 392 | -1.90145 | 1.35699 | 0E-7 | 1.00000000 |
| Zscore: OI10 | 392 | -1.91746 | 1.44560 | 0E-7 | 1.00000000 |
| Zscore: OI11 | 392 | -1.94072 | 1.42921 | 0E-7 | 1.00000000 |
| Zscore: OP1 | 392 | -1.52437 | 1.41924 | 0E-7 | 1.00000000 |
| Zscore: OP2 | 392 | -1.57504 | 1.40046 | 0E-7 | 1.00000000 |
| Zscore: OP3 | 392 | -1.61296 | 1.51714 | 0E-7 | 1.00000000 |
| Zscore: OP4 | 392 | -1.32921 | 1.61874 | 0E-7 | 1.00000000 |
| Zscore: OP5 | 392 | -1.48989 | 1.41577 | 0E-7 | 1.00000000 |
| Zscore: OP6 | 392 | -1.50494 | 1.53989 | 0E-7 | 1.00000000 |
| Zscore: OP7 | 392 | -1.48825 | 1.60258 | 0E-7 | 1.00000000 |
| Zscore: OP8 | 392 | -1.63833 | 1.49830 | 0E-7 | 1.00000000 |
| Zscore: OP9 | 392 | -1.55068 | 1.45113 | 0E-7 | 1.00000000 |
| Valid N (listwise) | 392 | | | | |

Appendix H

Reliability Test and Composite Reliability

1. Reliability of Pilot Test (N = 41)

Reliability of Continuous Learning

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .857 | 3 |

Reliability of Inquiry and Dialogue

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .757 | 3 |

Reliability of Team Learning

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .812 | 3 |

Reliability of Embedded System

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .881 | 3 |

Reliability of Empowerment

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .789 | 3 |

Reliability of System Connection

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .824 | 3 |

Reliability of Strategic Leadership

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .890 | 3 |

Reliability of Organizational Innovativeness

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .849 | 13 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item- Total Correlation | Cronbach's Alpha if Item Deleted |
|------|-------------------------------|-----------------------------------|---|--|
| OI1 | 41.34 | 64.280 | .671 | .830 |
| OI2 | 43.24 | 82.289 | -.452 | .890 |
| OI3 | 41.46 | 63.405 | .595 | .833 |
| OI4 | 41.54 | 60.155 | .733 | .822 |
| OI5 | 41.51 | 61.006 | .719 | .824 |
| OI6 | 41.54 | 60.705 | .732 | .823 |
| OI7 | 41.49 | 60.606 | .657 | .827 |
| OI8 | 41.49 | 60.806 | .720 | .824 |
| OI9 | 42.22 | 62.826 | .570 | .834 |
| OI10 | 41.56 | 63.002 | .669 | .829 |
| OI11 | 41.46 | 61.755 | .718 | .825 |
| OI12 | 41.56 | 59.952 | .711 | .823 |
| OI13 | 43.39 | 78.994 | -.266 | .886 |

Reliability of Organizational Performance

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .827 | 12 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| OP1 | 37.10 | 62.990 | .723 | .798 |
| OP2 | 37.12 | 58.910 | .753 | .790 |
| OP3 | 38.68 | 80.222 | -.271 | .873 |
| OP4 | 37.20 | 63.761 | .651 | .803 |
| OP5 | 36.83 | 63.695 | .672 | .802 |
| OP6 | 38.88 | 79.910 | -.286 | .864 |
| OP7 | 37.10 | 57.540 | .821 | .783 |
| OP8 | 37.07 | 57.970 | .736 | .790 |
| OP9 | 36.95 | 61.048 | .680 | .797 |
| OP10 | 37.20 | 59.461 | .725 | .792 |
| OP11 | 38.56 | 70.352 | .161 | .840 |
| OP12 | 37.24 | 57.839 | .712 | .792 |

2. Reliability Test Results (N = 392)

Reliability of Continuous Learning

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .871 | 3 |

Reliability of Inquiry and Dialogue

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .889 | 3 |

Reliability of Team Learning

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .917 | 3 |

Reliability of Embedded System

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .923 | 3 |

Reliability of Empowerment

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| .865 | 3 |

Reliability of System Connection

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .923 | 3 |

Reliability of Strategic Leadership

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .929 | 3 |

Reliability of Organizational Innovativeness

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .934 | 11 |

Reliability of Organizational Performance

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---------------------|------------|
| .920 | 9 |

Composite Reliability

| Variable Name | Factor Loading | Factor Loading2 | S.E. | Composite Reliability |
|-----------------------------|----------------|-----------------|--------------|-----------------------|
| CL1 | 0.821 | | 0.054 | |
| CL2 | 0.843 | | 0.054 | |
| CL3 | 0.832 | | 0.055 | |
| Continuous Learning | 2.496 | 6.230 | 0.163 | 0.975 |
| ID1 | 0.912 | | 0.043 | |
| ID2 | 0.797 | | 0.047 | |
| ID3 | 0.861 | | 0.039 | |
| Inquiry and Dialogue | 2.570 | 6.605 | 0.129 | 0.981 |
| TL1 | 0.877 | | 0.041 | |
| TL2 | 0.939 | | 0.039 | |
| TL3 | 0.844 | | 0.043 | |
| Team Learning | 2.660 | 7.076 | 0.123 | 0.983 |
| ES1 | 0.901 | | 0.039 | |
| ES2 | 0.896 | | 0.038 | |
| ES3 | 0.886 | | 0.039 | |
| Embedded System | 2.683 | 7.198 | 0.116 | 0.984 |
| EM1 | 0.852 | | 0.046 | |
| EM2 | 0.861 | | 0.047 | |
| EM3 | 0.773 | | 0.046 | |
| Empowerment | 2.486 | 6.180 | 0.139 | 0.978 |
| SC1 | 0.887 | | 0.038 | |
| SC2 | 0.918 | | 0.037 | |
| SC3 | 0.878 | | 0.039 | |
| System Connection | 2.683 | 7.198 | 0.114 | 0.984 |
| SL1 | 0.873 | | 0.039 | |
| SL2 | 0.927 | | 0.038 | |
| SL3 | 0.912 | | 0.039 | |
| Strategic Leadership | 2.712 | 7.355 | 0.116 | 0.984 |
| OI1 | 0.817 | | 0.054 | |
| OI2 | 0.746 | | 0.055 | |
| OI3 | 0.760 | | 0.054 | |
| OI4 | 0.761 | | 0.054 | |
| OI5 | 0.741 | | 0.056 | |
| OI6 | 0.747 | | 0.054 | |
| OI7 | 0.771 | | 0.054 | |
| OI8 | 0.762 | | 0.052 | |

Composite Reliability (Continued)

| Variable Name | Factor Loading | Factor Loading2 | S.E. | Composite Reliability |
|--------------------------------------|-----------------------|------------------------|--------------|------------------------------|
| OI9 | 0.717 | | 0.055 | |
| OI10 | 0.711 | | 0.054 | |
| OI11 | 0.706 | | 0.054 | |
| Organizational Innovativeness | 8.239 | 67.881 | 0.596 | 0.991 |
| OP1 | 0.789 | | 0.057 | |
| OP2 | 0.779 | | 0.058 | |
| OP3 | 0.655 | | 0.057 | |
| OP4 | 0.767 | | 0.059 | |
| OP5 | 0.770 | | 0.059 | |
| OP6 | 0.679 | | 0.058 | |
| OP7 | 0.802 | | 0.055 | |
| OP8 | 0.762 | | 0.055 | |
| OP9 | 0.748 | | 0.058 | |
| Organizational Performance | 6.751 | 45.576 | 0.516 | 0.989 |

Appendix I

Variance Extracted and Correlation Matrix

Variance Extracted of Variables

| Variable Name | SMC | S.E. | VE |
|-----------------------------|--------------|--------------|--------------|
| CL1 | 0.674 | 0.060 | |
| CL2 | 0.711 | 0.053 | |
| CL3 | 0.692 | 0.056 | |
| Continuous Learning | 2.077 | 0.169 | 0.925 |
| ID1 | 0.831 | 0.040 | |
| ID2 | 0.634 | 0.061 | |
| ID3 | 0.741 | 0.039 | |
| Inquiry and Dialogue | 2.206 | 0.140 | 0.940 |
| TL1 | 0.768 | 0.039 | |
| TL2 | 0.881 | 0.032 | |
| TL3 | 0.712 | 0.043 | |
| Team Learning | 2.361 | 0.114 | 0.954 |
| ES1 | 0.812 | 0.032 | |
| ES2 | 0.802 | 0.031 | |
| ES3 | 0.784 | 0.035 | |
| Embedded System | 2.398 | 0.098 | 0.961 |
| EM1 | 0.726 | 0.058 | |
| EM2 | 0.742 | 0.049 | |
| EM3 | 0.597 | 0.053 | |
| Empowerment | 2.065 | 0.160 | 0.928 |
| SC1 | 0.787 | 0.045 | |
| SC2 | 0.843 | 0.036 | |
| SC3 | 0.772 | 0.043 | |
| System Connection | 2.402 | 0.124 | 0.951 |
| SL1 | 0.761 | 0.038 | |
| SL2 | 0.860 | 0.028 | |
| SL3 | 0.832 | 0.029 | |
| Strategic Leadership | 2.453 | 0.095 | 0.963 |
| OI1 | 0.668 | 0.041 | |
| OI2 | 0.557 | 0.053 | |
| OI3 | 0.578 | 0.050 | |
| OI4 | 0.579 | 0.049 | |
| OI5 | 0.549 | 0.054 | |
| OI6 | 0.558 | 0.051 | |
| OI7 | 0.594 | 0.048 | |
| OI8 | 0.581 | 0.045 | |
| OI9 | 0.514 | 0.056 | |

Variance Extracted of Variables (Continued)

| Variable Name | SMC | S.E. | VE |
|--------------------------------------|--------------|--------------|--------------|
| OI10 | 0.506 | 0.053 | |
| OI11 | 0.498 | 0.054 | |
| Organizational Innovativeness | 6.182 | 0.554 | 0.918 |
| OP1 | 0.623 | 0.056 | |
| OP2 | 0.606 | 0.057 | |
| OP3 | 0.429 | 0.070 | |
| OP4 | 0.588 | 0.060 | |
| OP5 | 0.593 | 0.062 | |
| OP6 | 0.461 | 0.071 | |
| OP7 | 0.644 | 0.049 | |
| OP8 | 0.581 | 0.054 | |
| OP9 | 0.560 | 0.061 | |
| Organizational Performance | 5.085 | 0.540 | 0.904 |

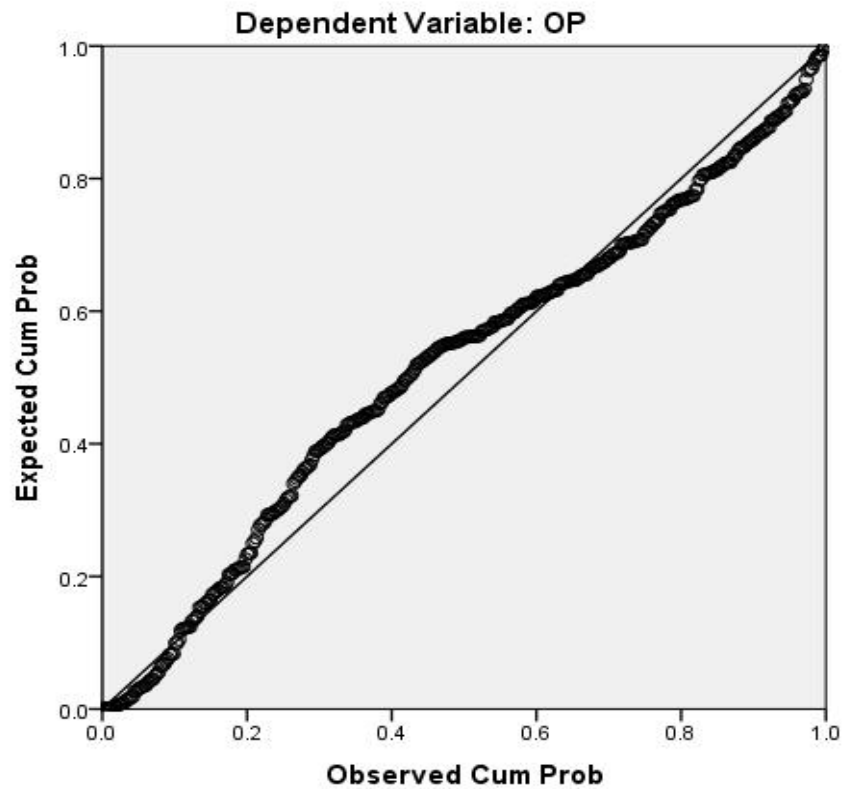
Correlation Matrix between Variables

| Variable Name | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Continuous Learning (1) | 1.000 | | | | | | | | |
| Inquiry and Dialogue (2) | 0.528 | 1.000 | | | | | | | |
| Team Learning (3) | 0.583 | 0.457 | 1.000 | | | | | | |
| Embedded System (4) | 0.486 | 0.592 | 0.470 | 1.000 | | | | | |
| Empowerment (5) | 0.620 | 0.600 | 0.542 | 0.562 | 1.000 | | | | |
| System Connection (6) | 0.580 | 0.486 | 0.557 | 0.379 | 0.488 | 1.000 | | | |
| Strategic Leadership (7) | 0.523 | 0.620 | 0.587 | 0.570 | 0.619 | 0.522 | 1.000 | | |
| Organizational Innovateness (8) | 0.456 | 0.487 | 0.428 | 0.512 | 0.514 | 0.488 | 0.613 | 1.000 | |
| Organizational Performance (9) | 0.556 | 0.575 | 0.516 | 0.502 | 0.520 | 0.474 | 0.601 | 0.747 | 1.000 |

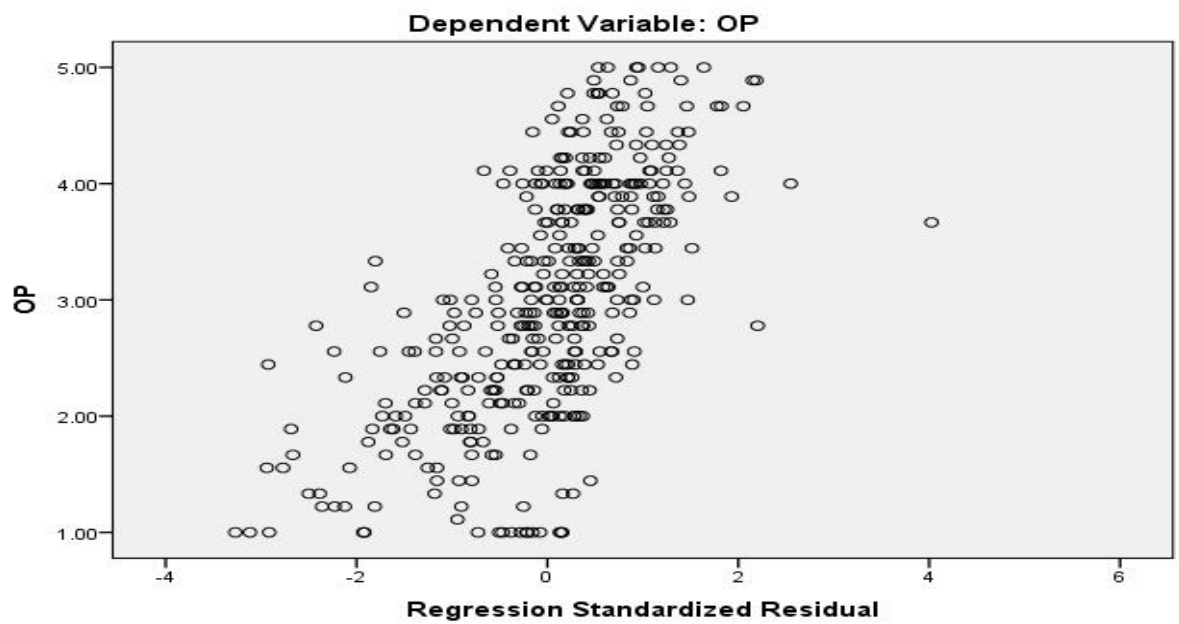
Appendix J

Normal P-P Plots and Q-Q Plots

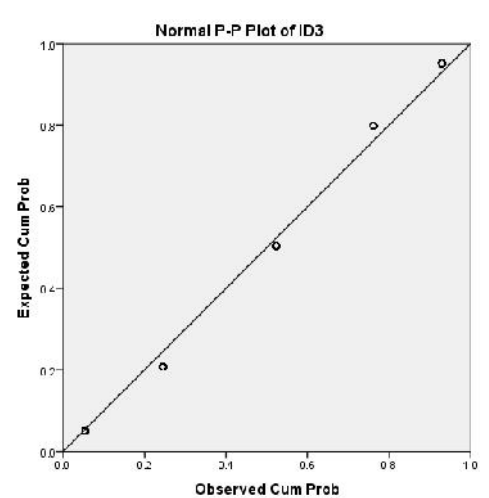
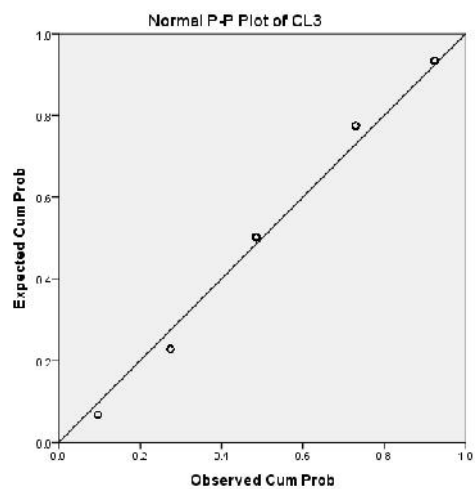
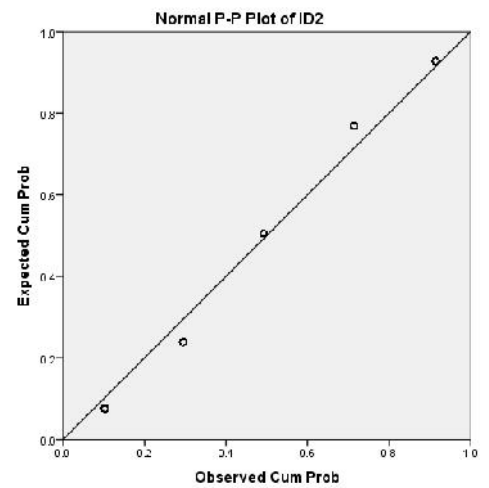
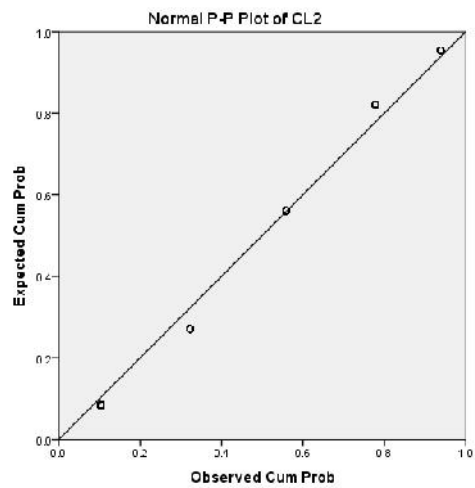
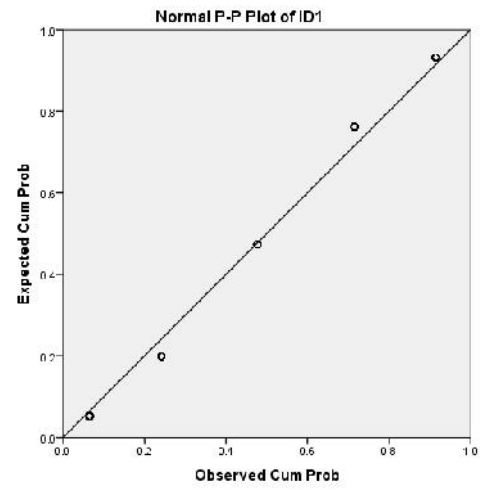
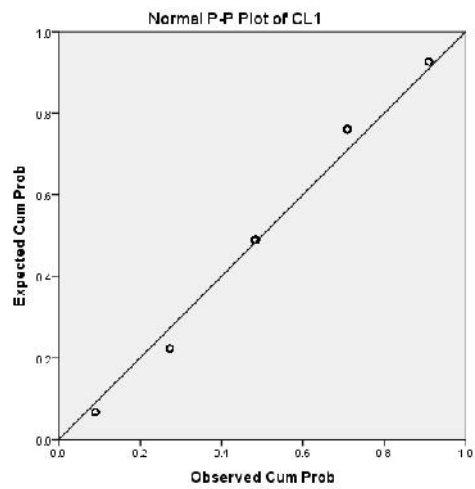
Normal P-P Plot of Regression Standardized Residual



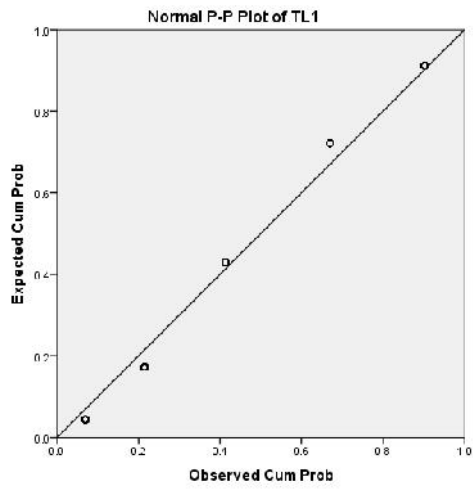
Scatterplot



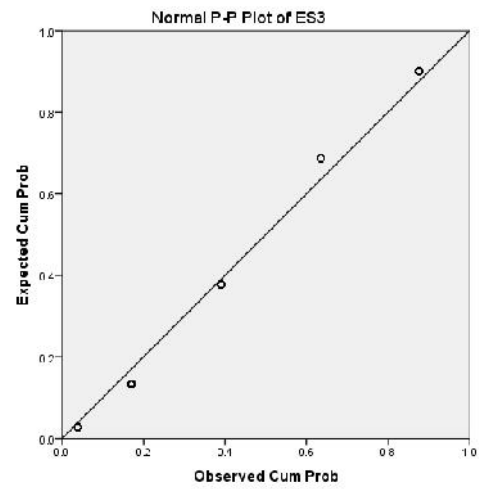
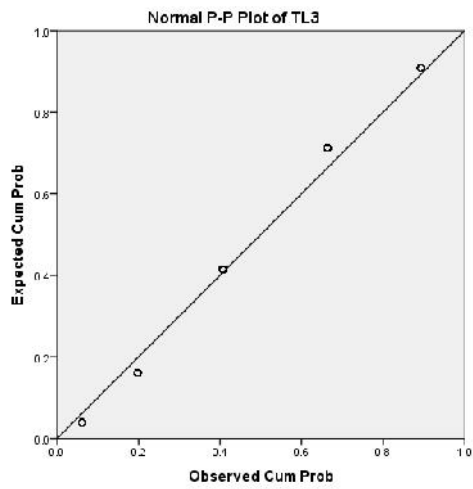
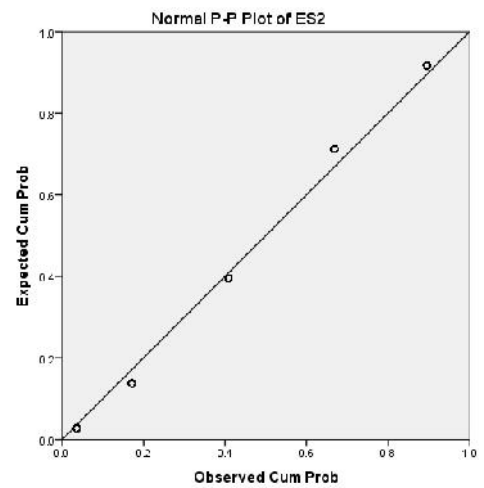
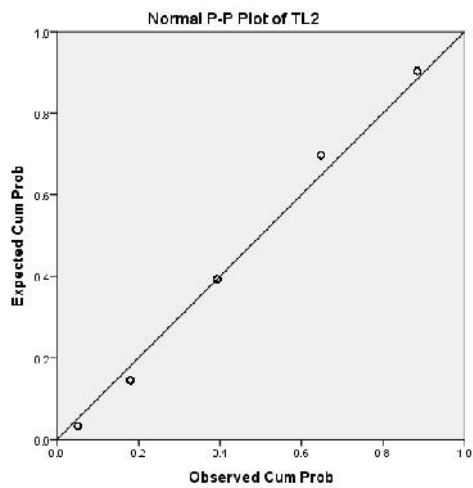
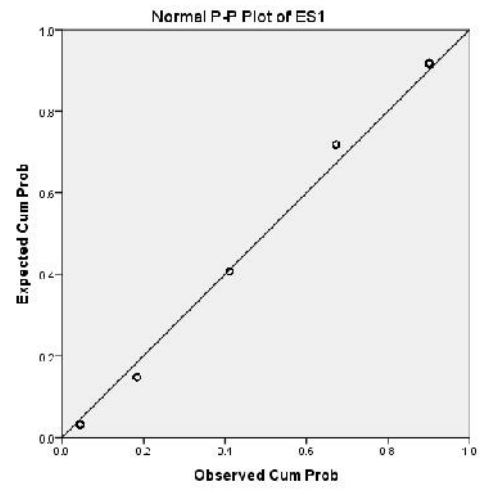
P-P Plots of Continuous Learning



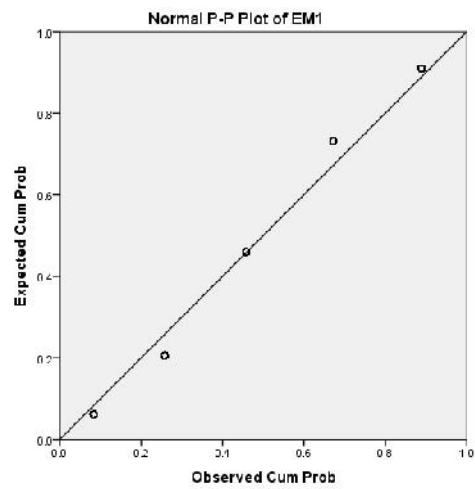
P-P Plots of Team Learning



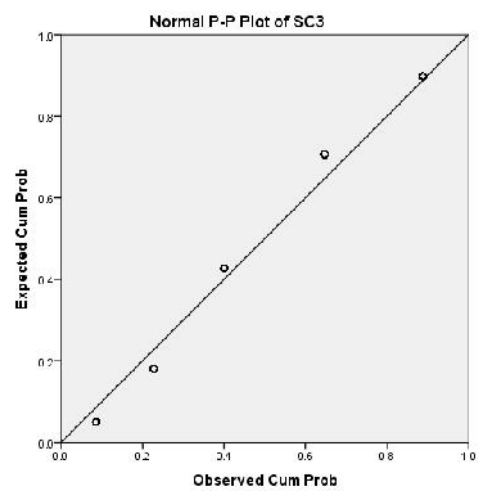
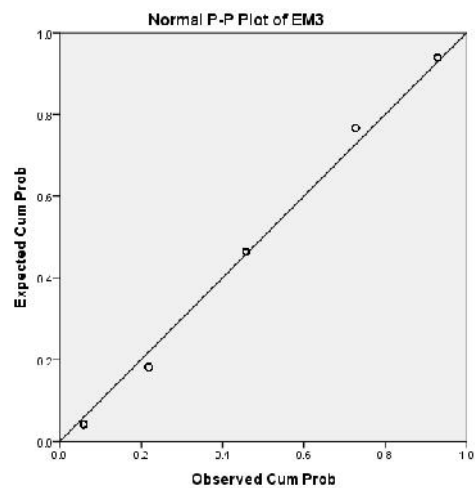
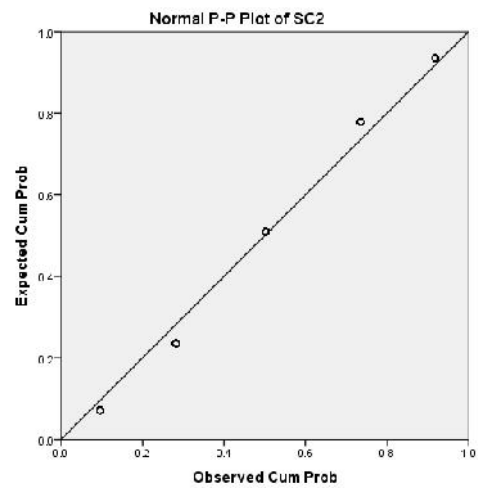
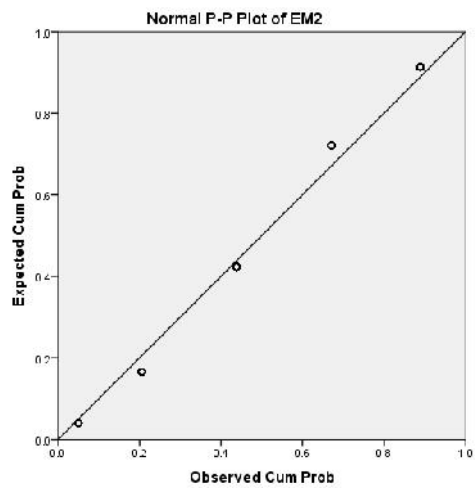
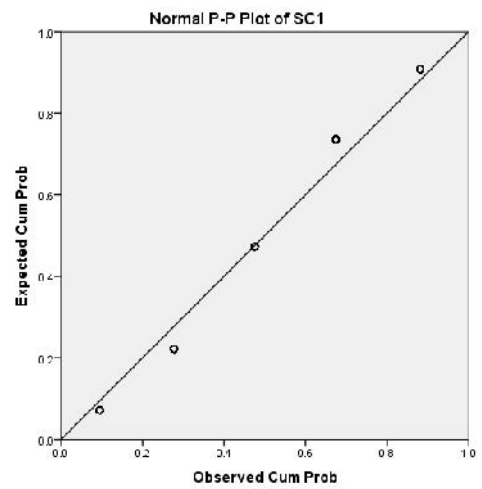
P-P Plots of Embedded System



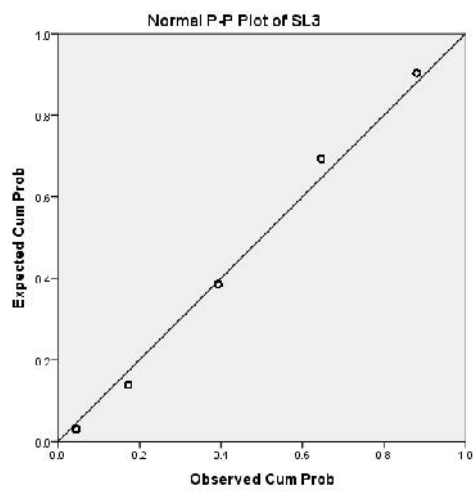
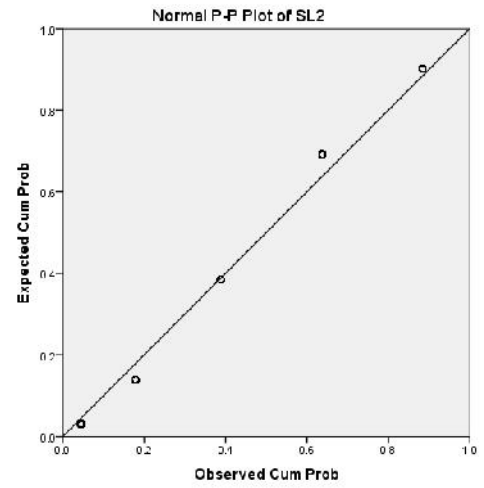
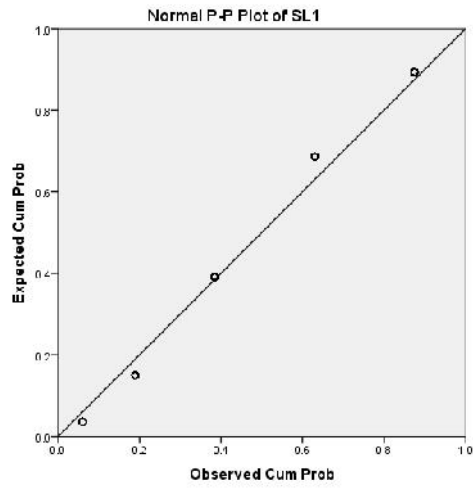
P-P Plots of Empowerment



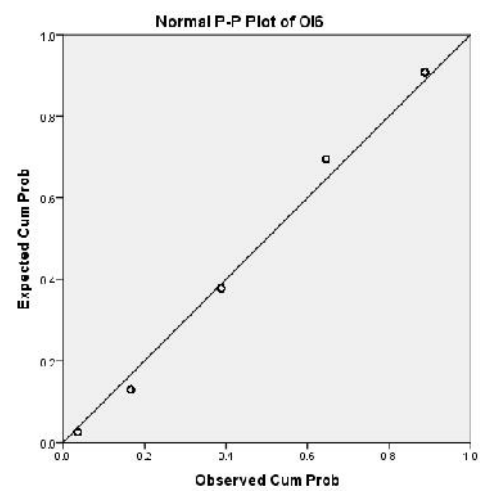
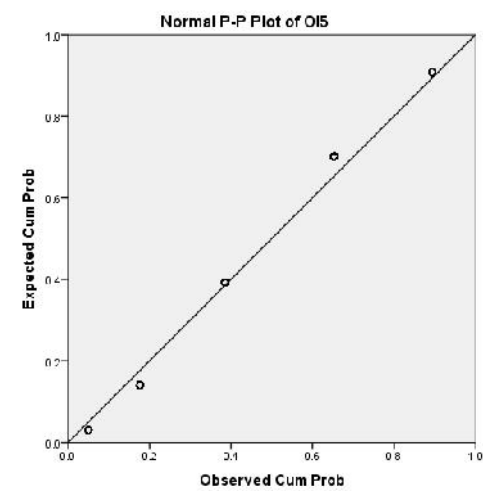
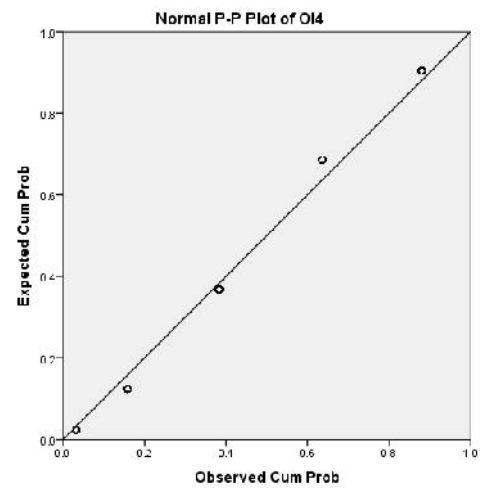
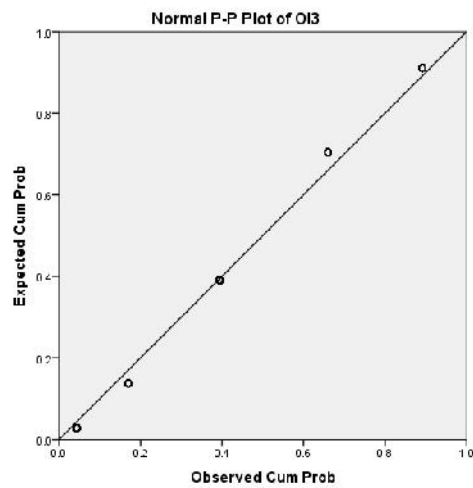
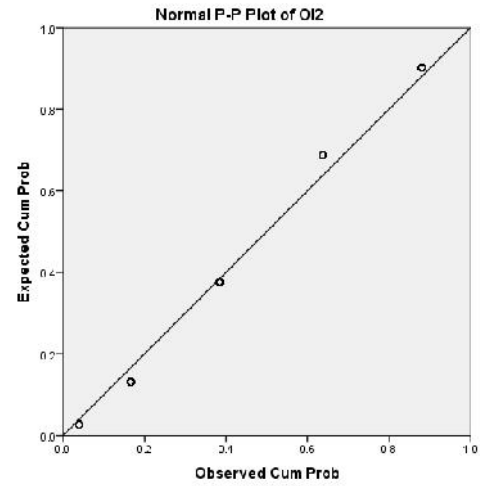
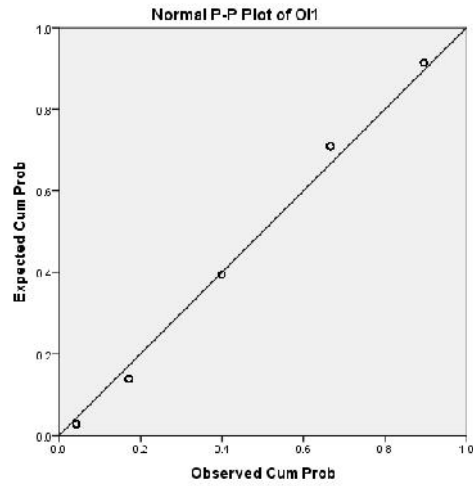
P-P Plots of System Connection

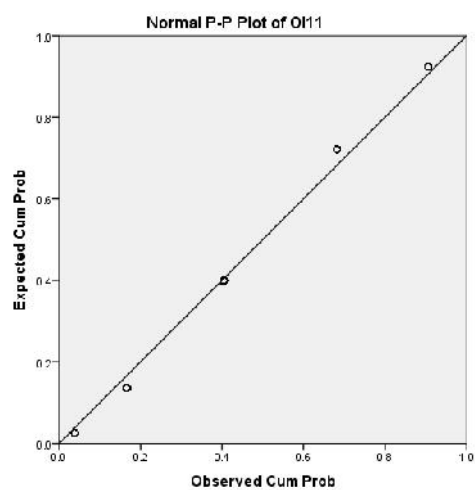
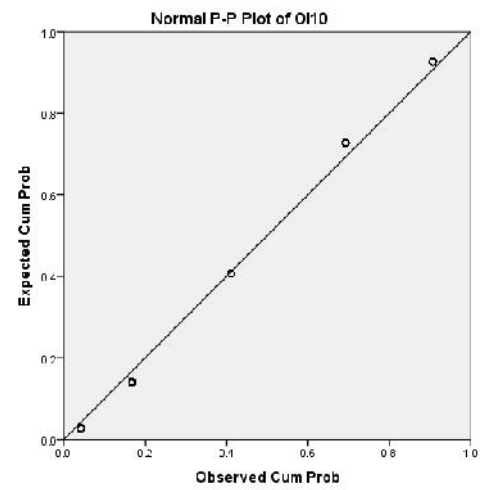
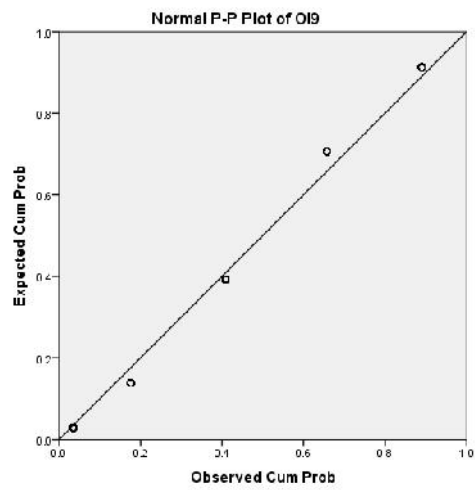
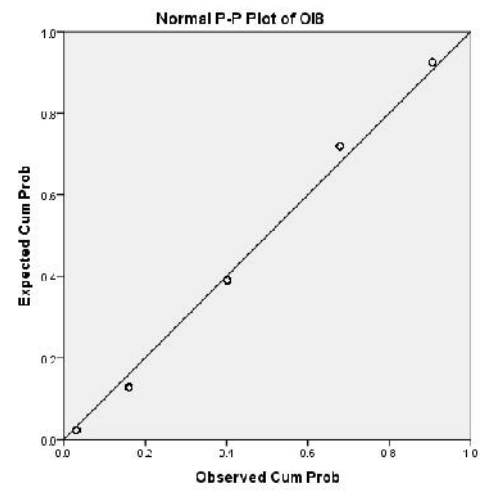
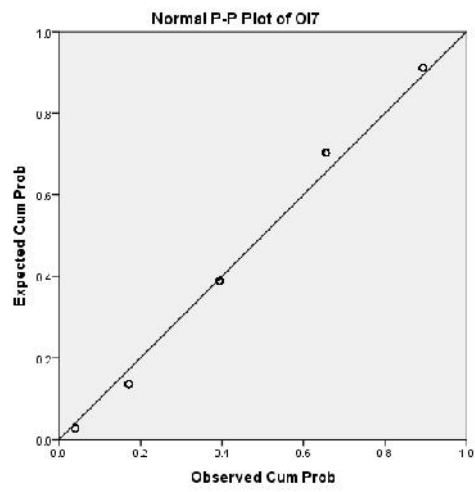


P-P Plots of Strategic Leadership

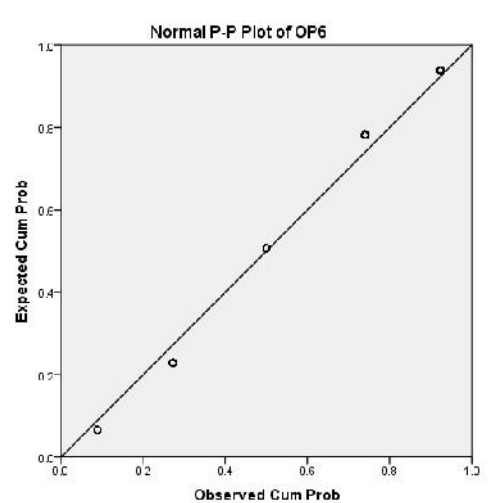
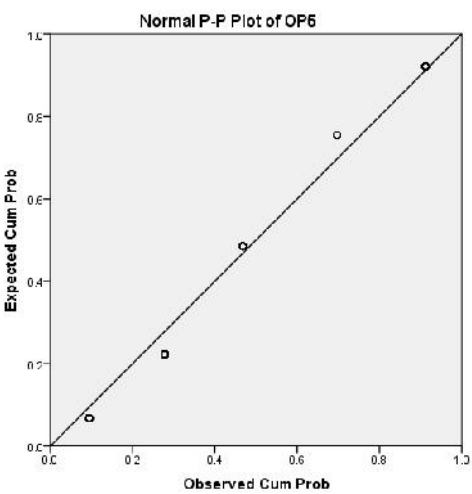
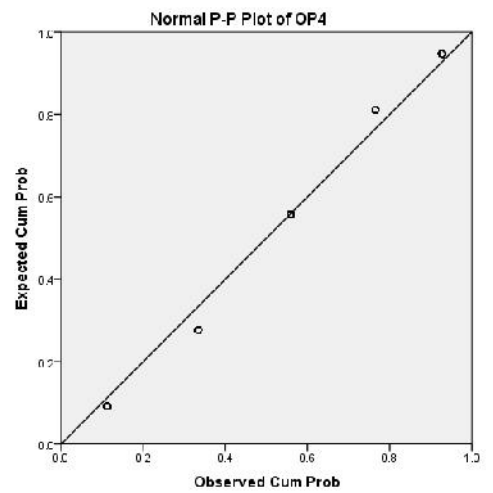
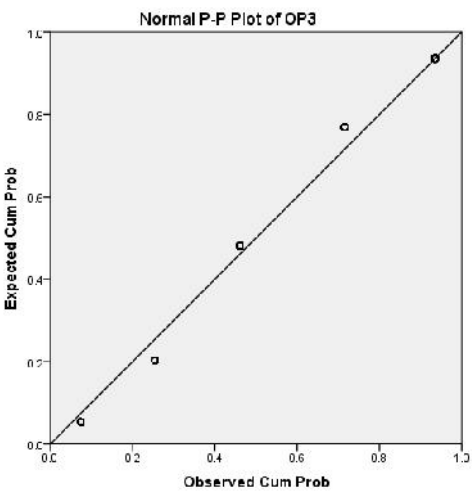
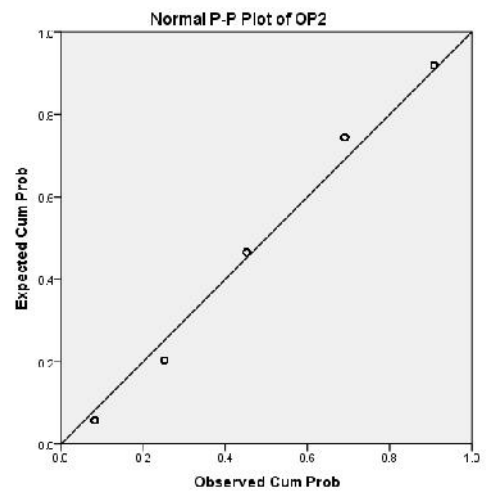
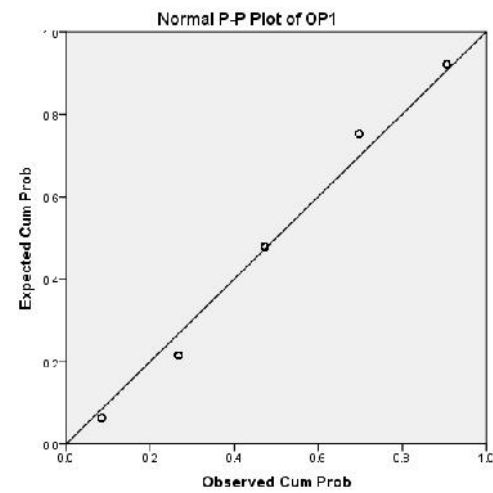


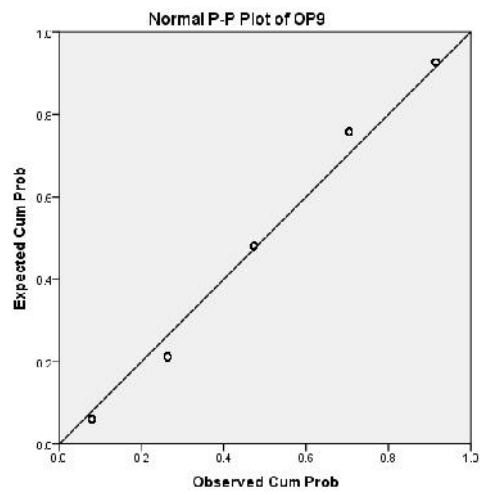
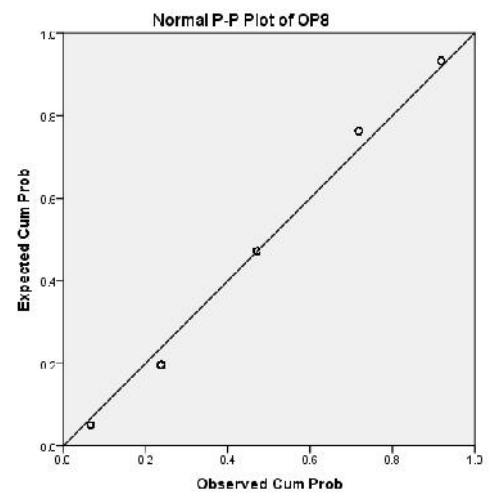
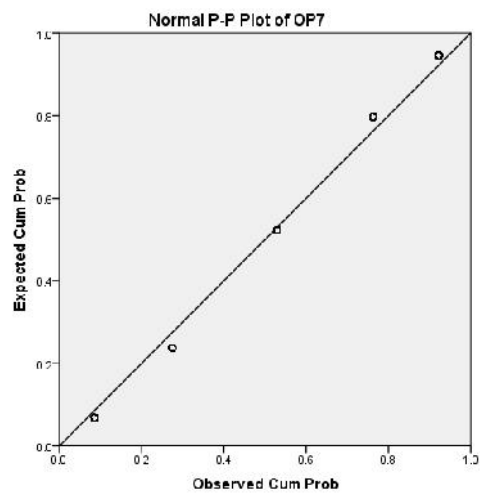
P-P Plots of Organizational Innovativeness



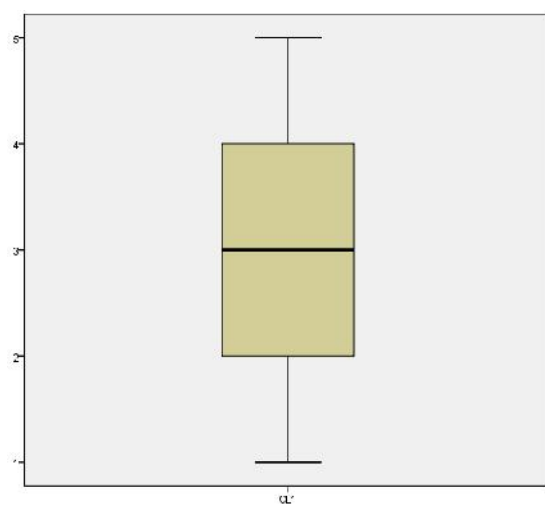


P-P Plots of Organizational Performance

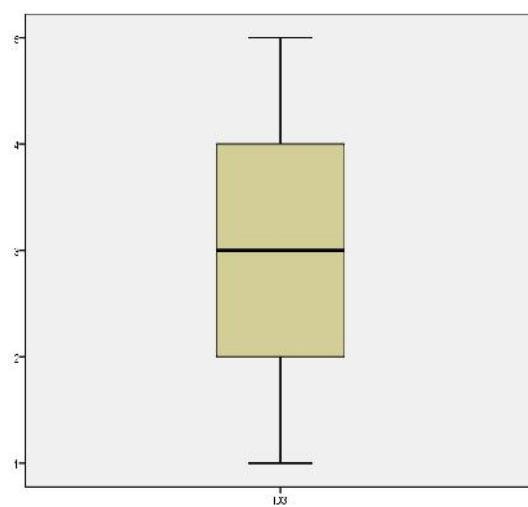
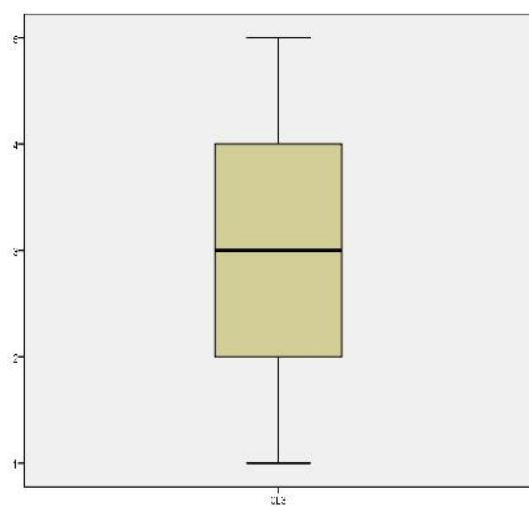
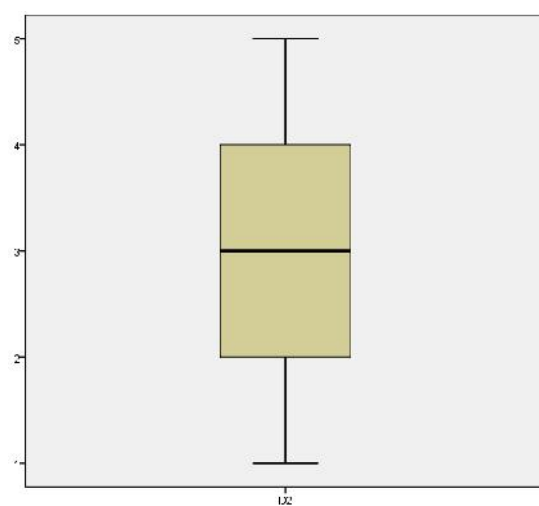
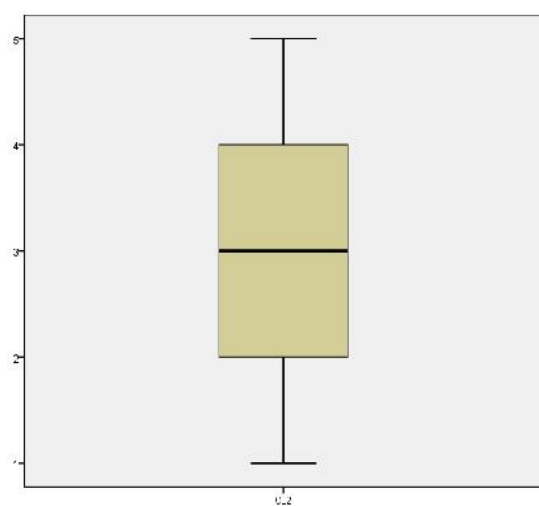
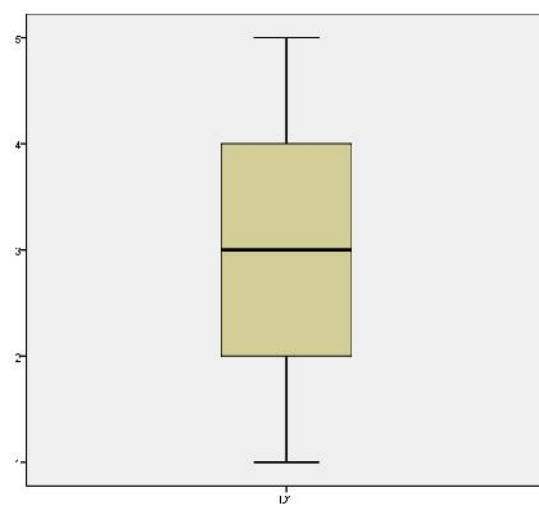




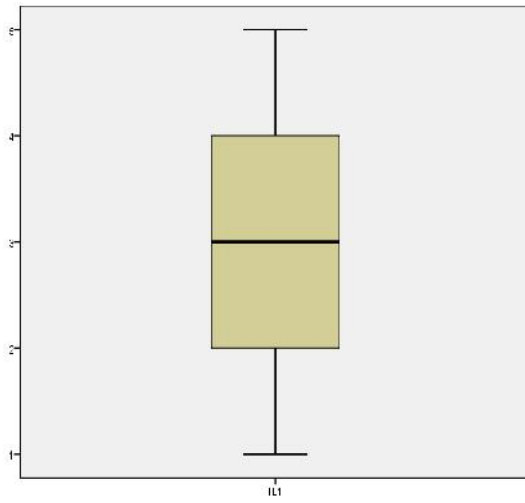
Q-Q Plots of Continuous Learning



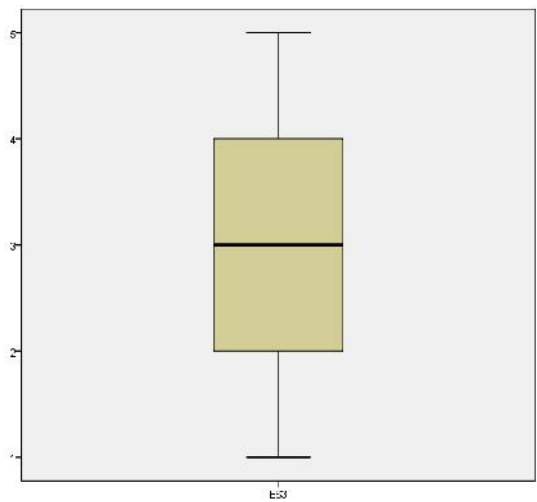
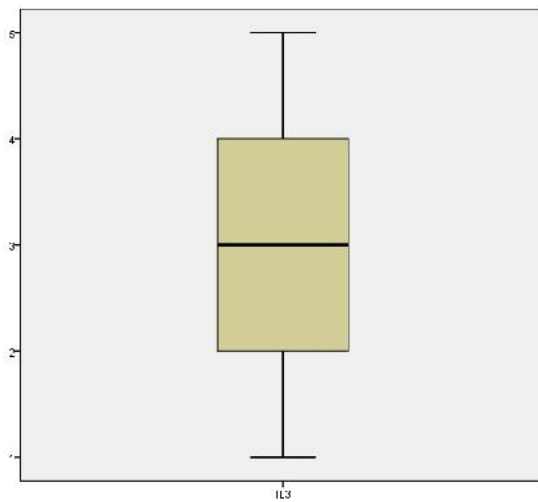
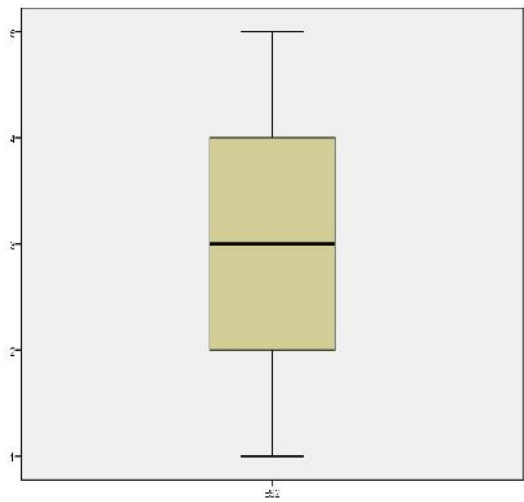
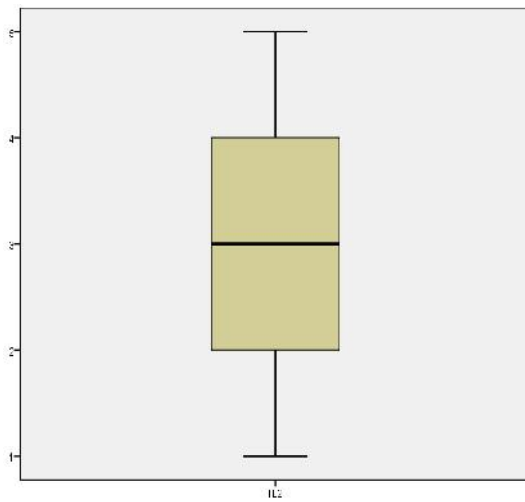
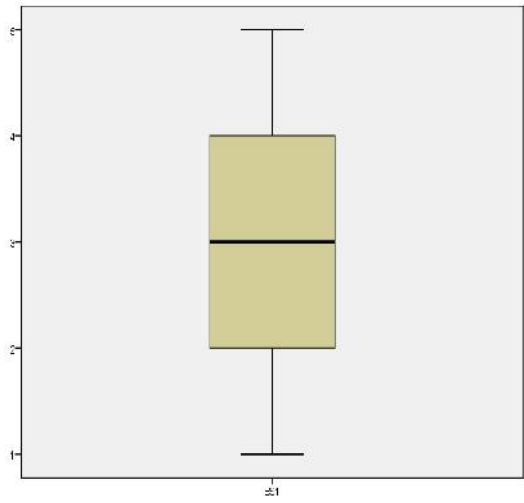
Q-Q Plots of Inquiry and Dialogue



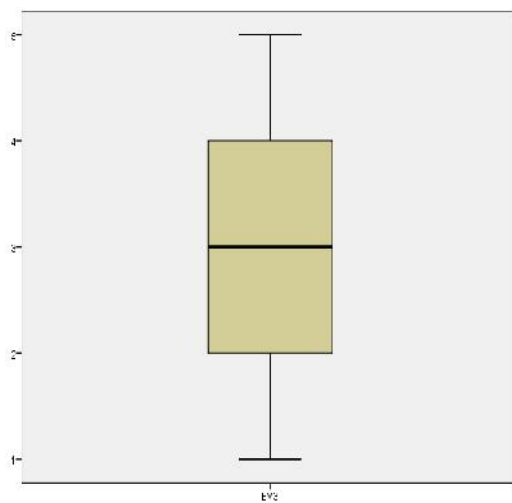
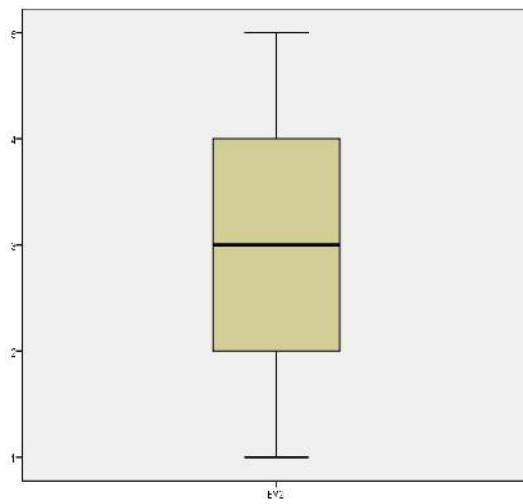
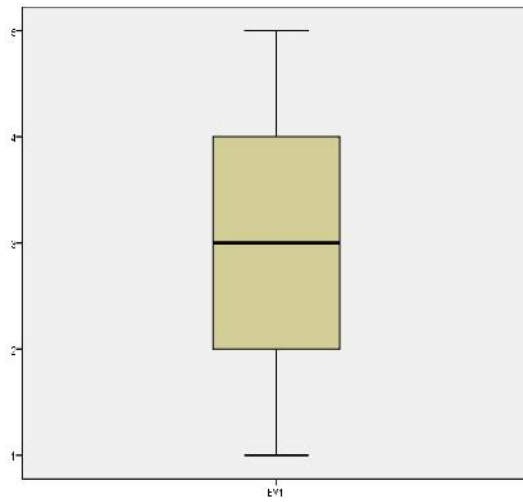
Q-Q Plots of Team Learning



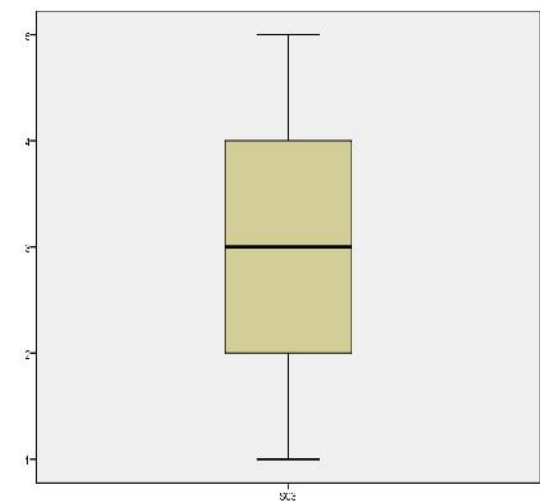
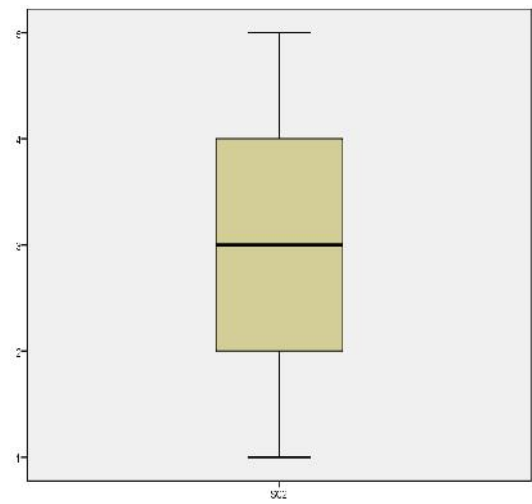
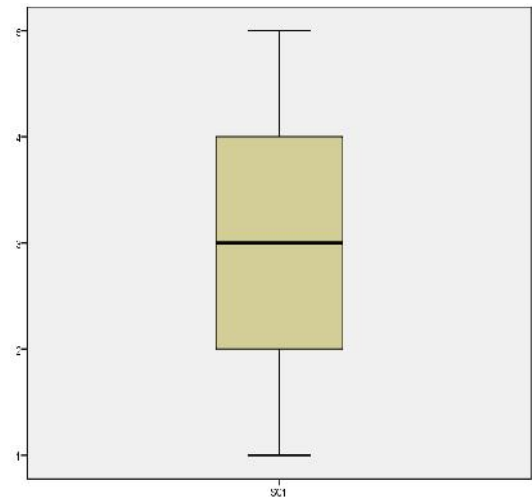
Q-Q Plots of Embedded System



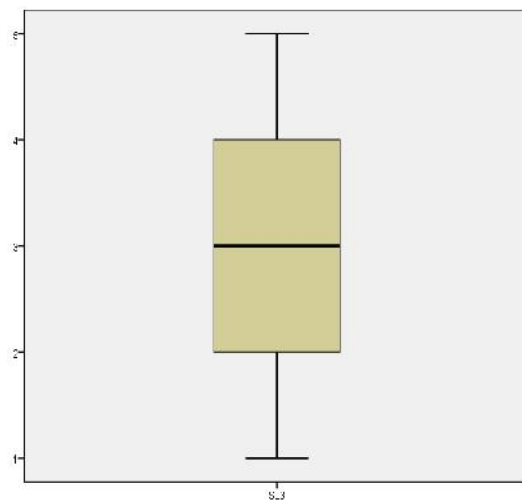
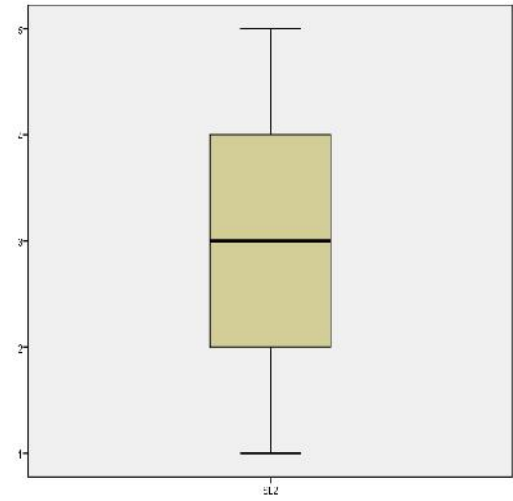
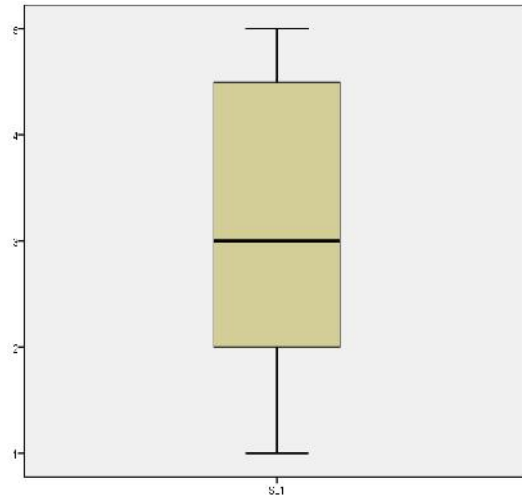
Q-Q Plots of Empowerment



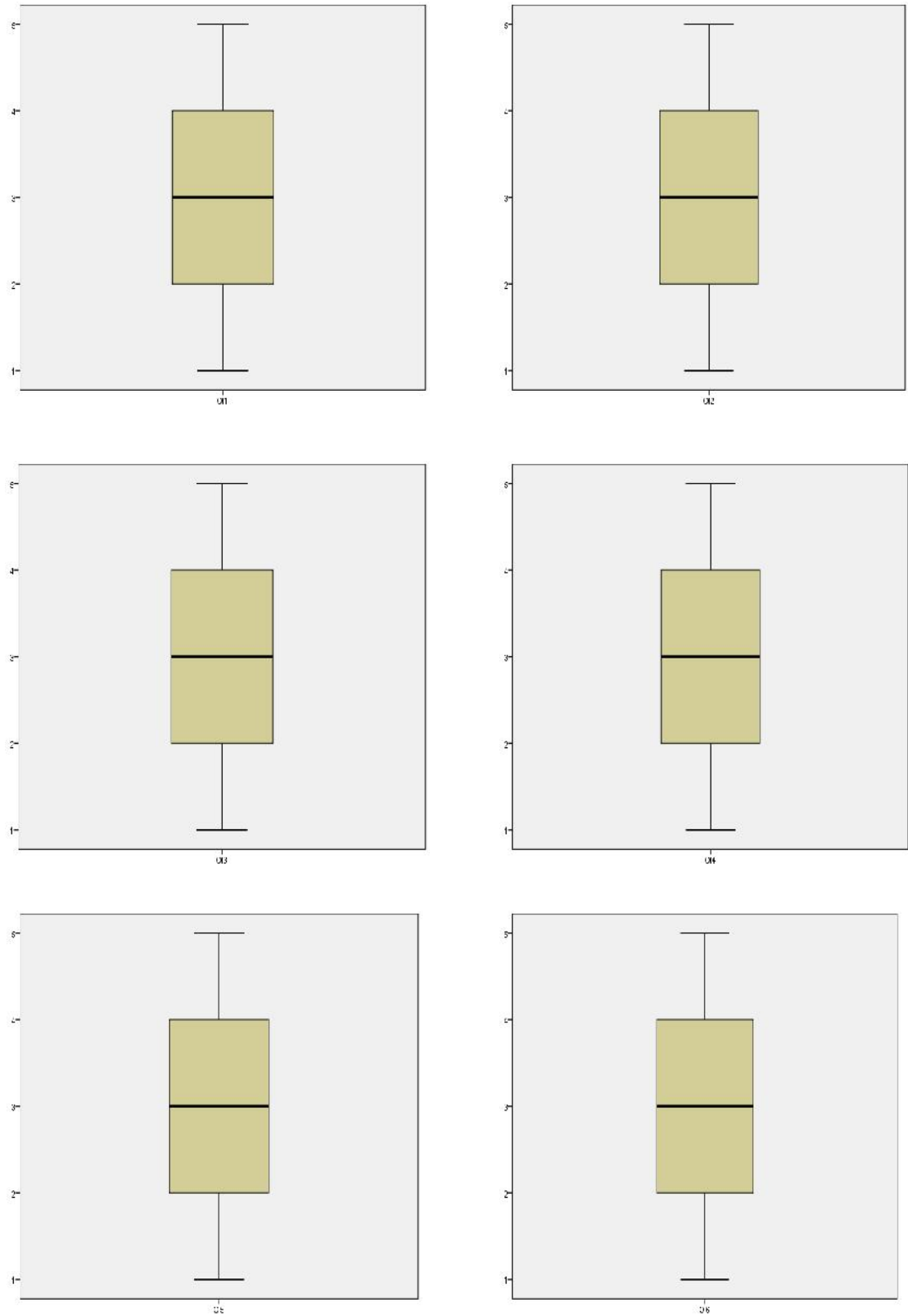
Q-Q Plots of System Connection

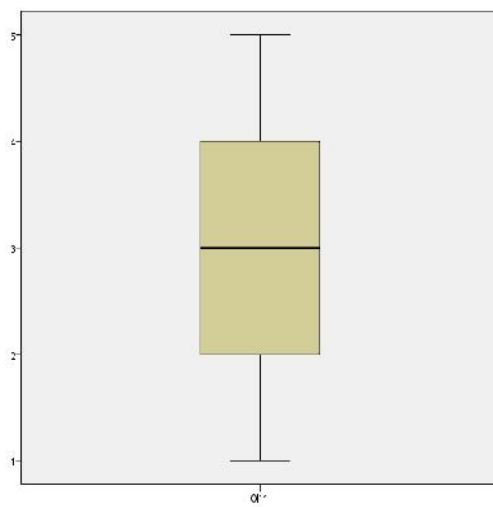
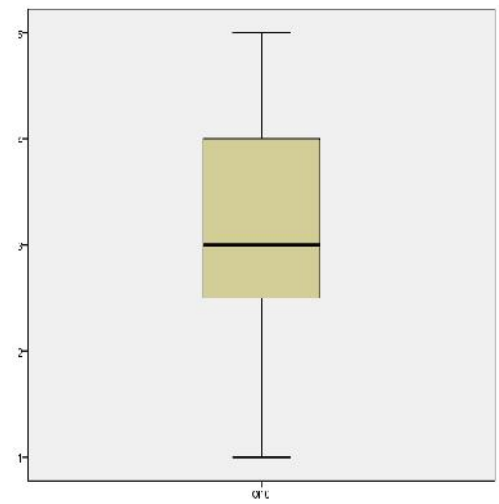
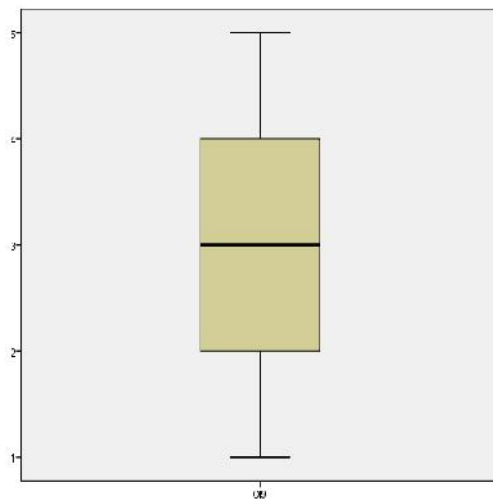
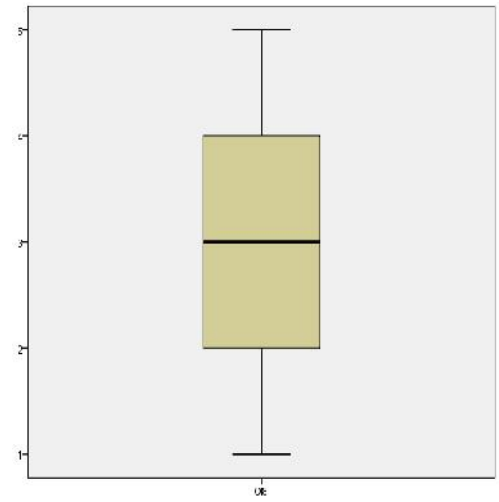
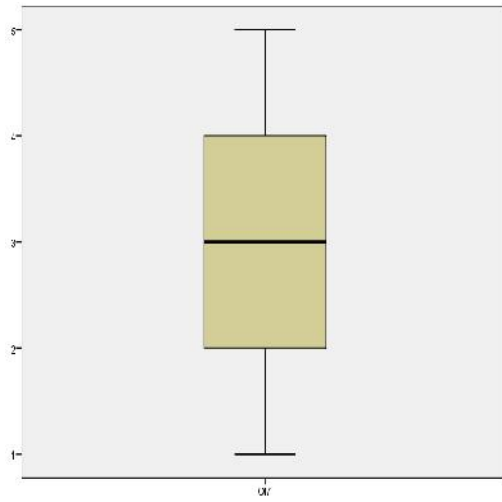


Q-Q Plots of Strategic Leadership

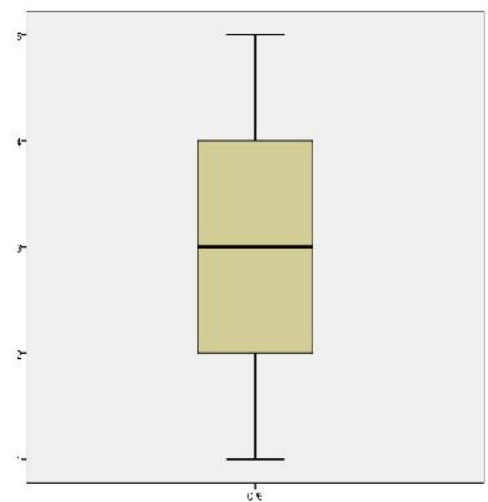
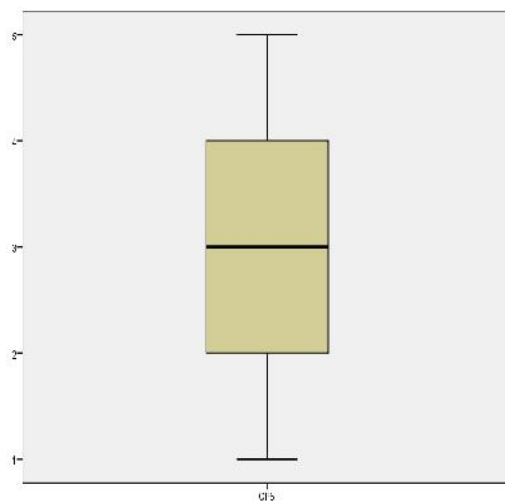
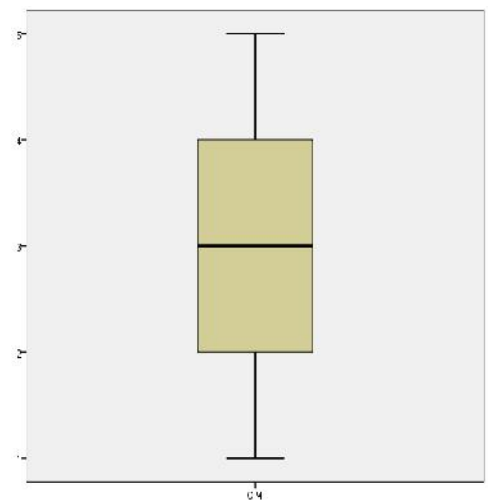
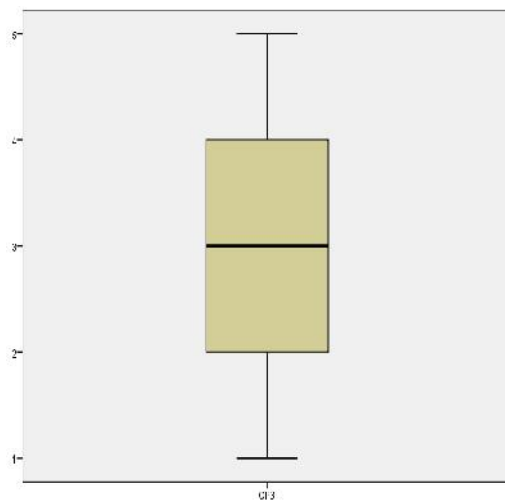
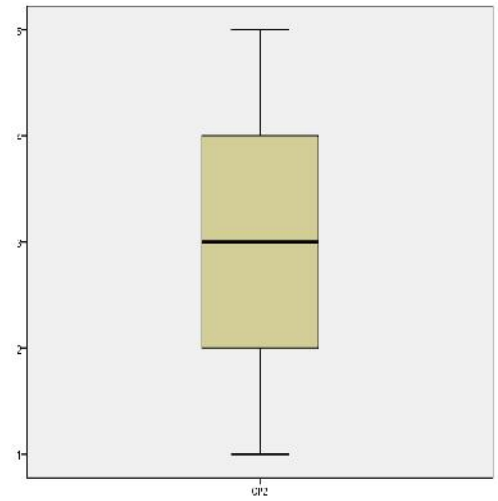
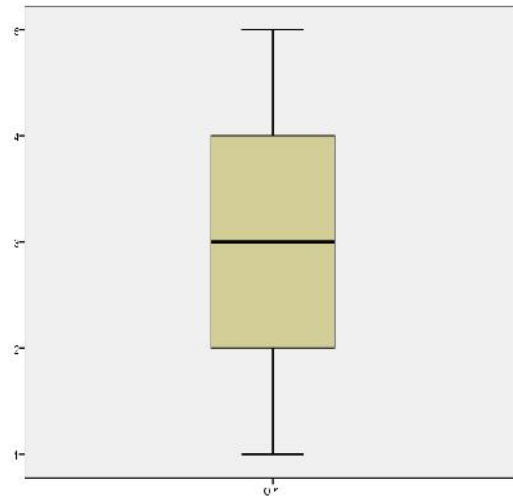


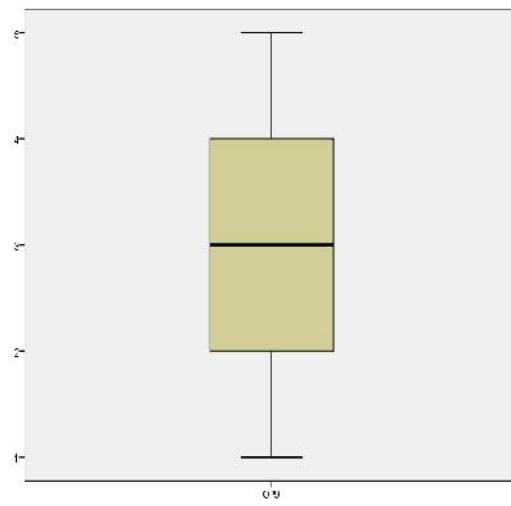
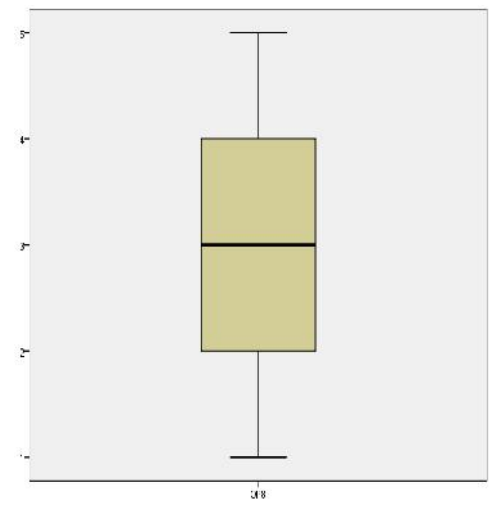
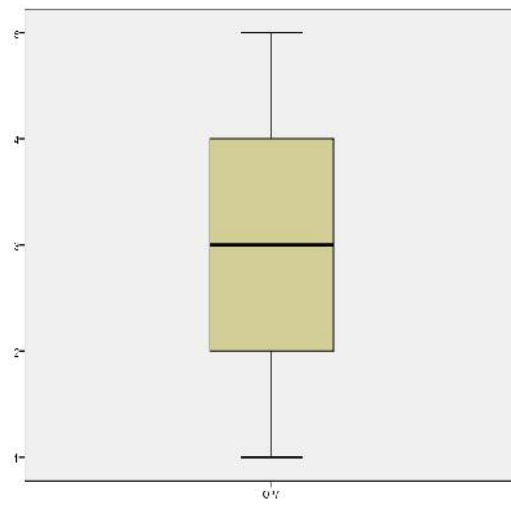
Q-Q Plots of Organizational Innovativeness





Q-Q Plots of Organizational Performance

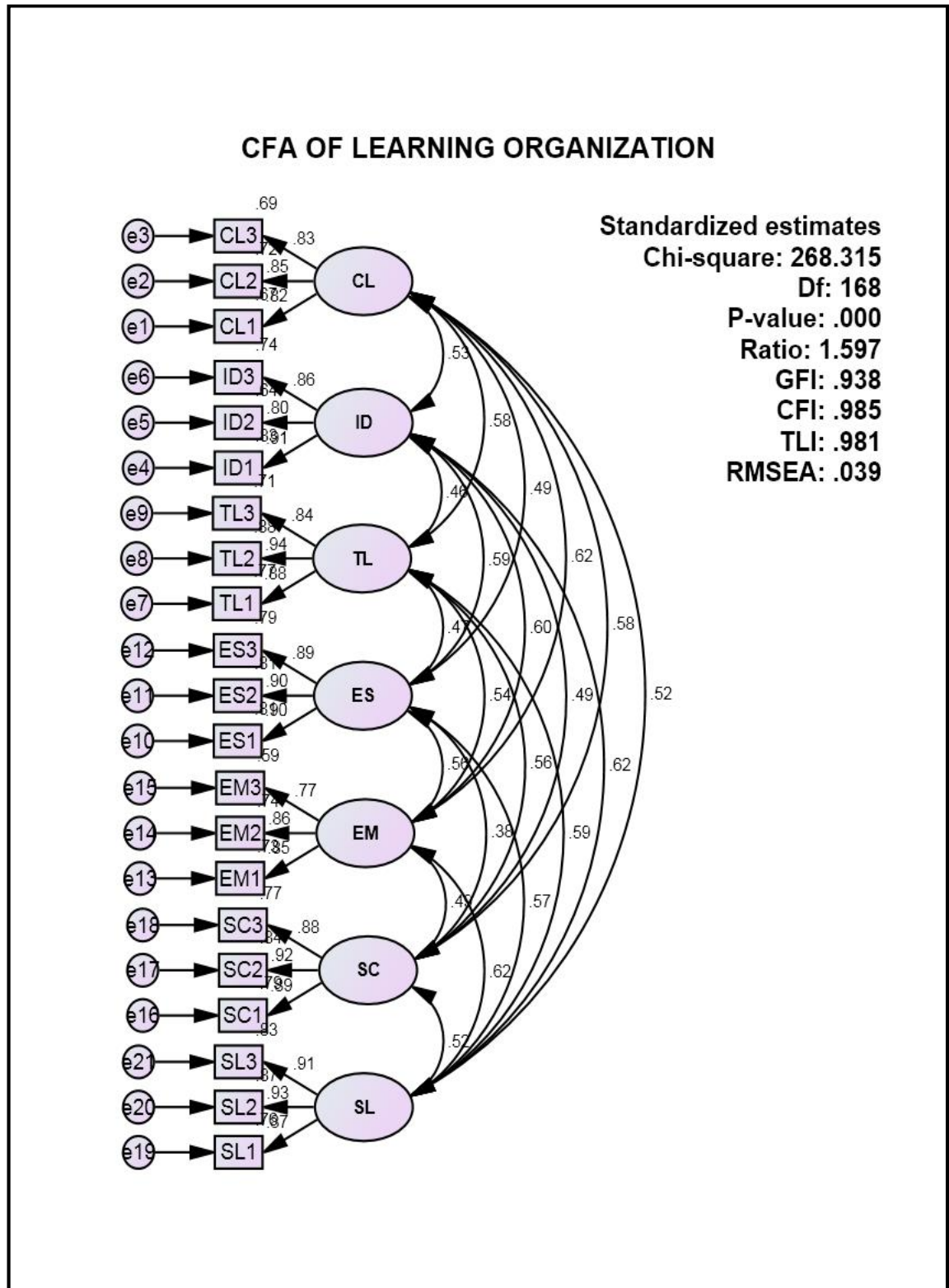




Appendix K

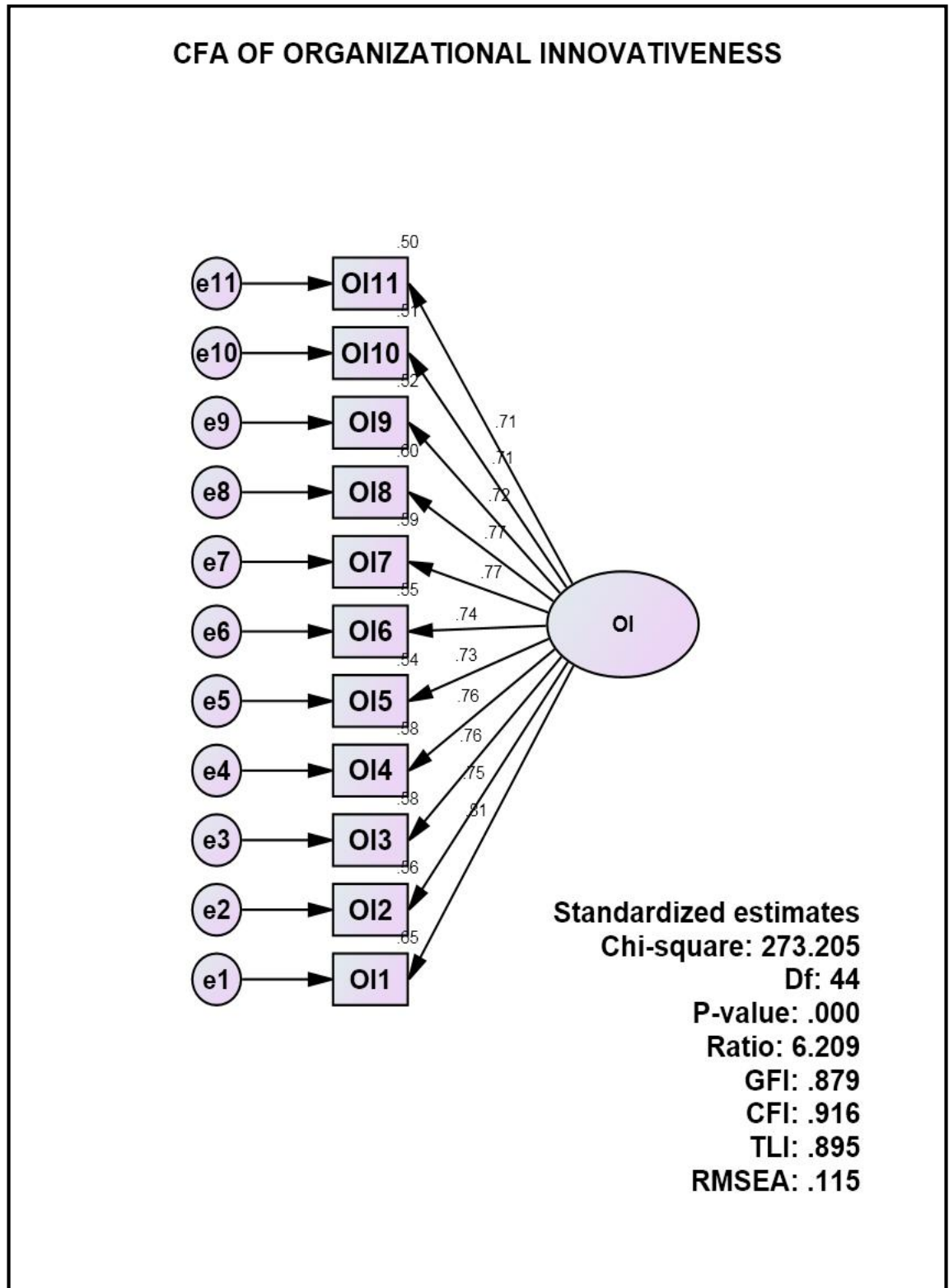
Measurement Model

Confirmatory Factor Analysis (CFA) of Learning Organization



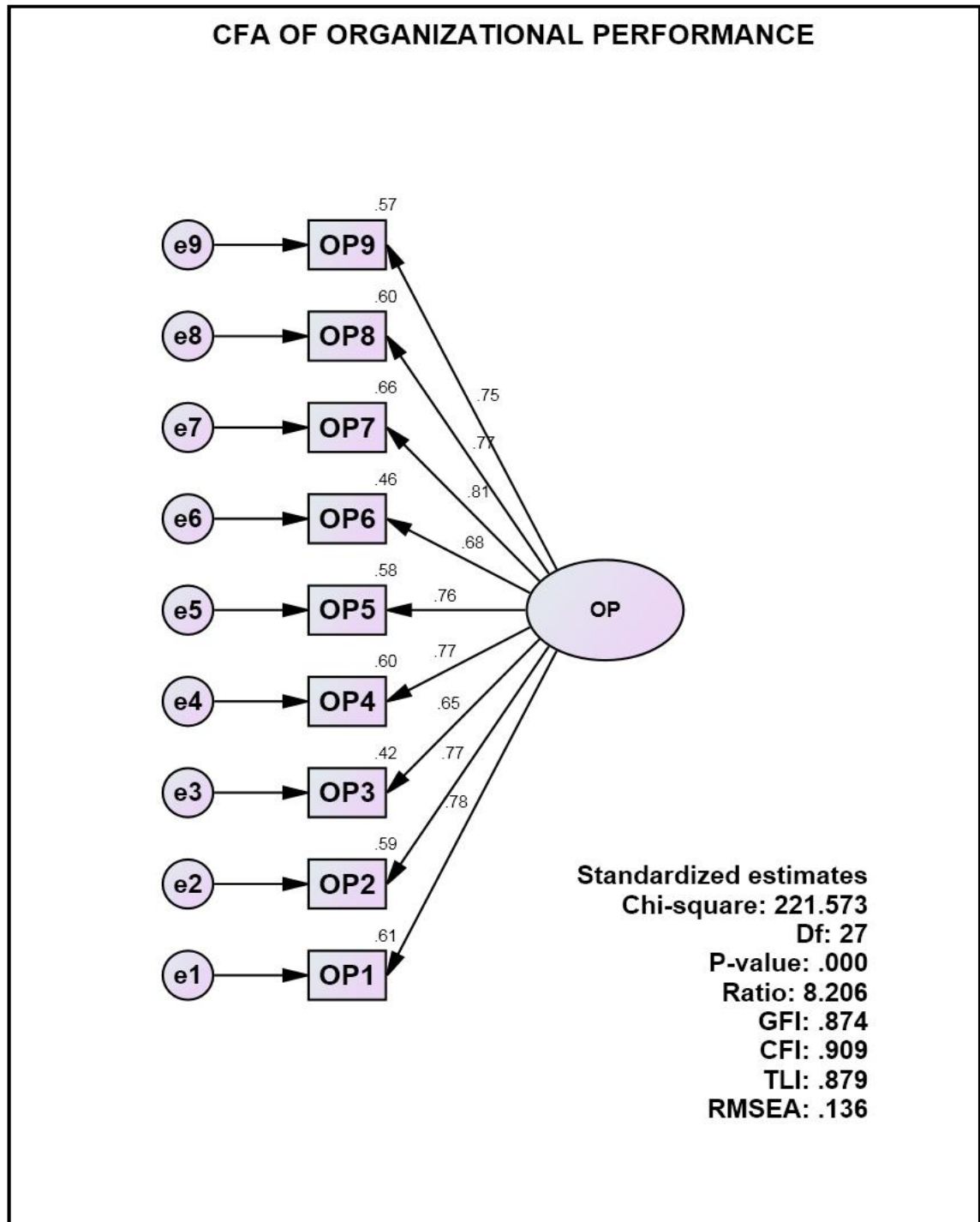
Note. CL=Continuous Learning; ID=Inquiry and Dialogue; TL=Team Learning; ES=Embedded System; EM=Empowerment; SC=System Connection; SL=Strategic Leadership.

Confirmatory Factor Analysis (CFA) of Organizational Innovativeness



Note: OI=Organizational Innovativeness

Confirmatory Factor Analysis (CFA) of Organizational Performance

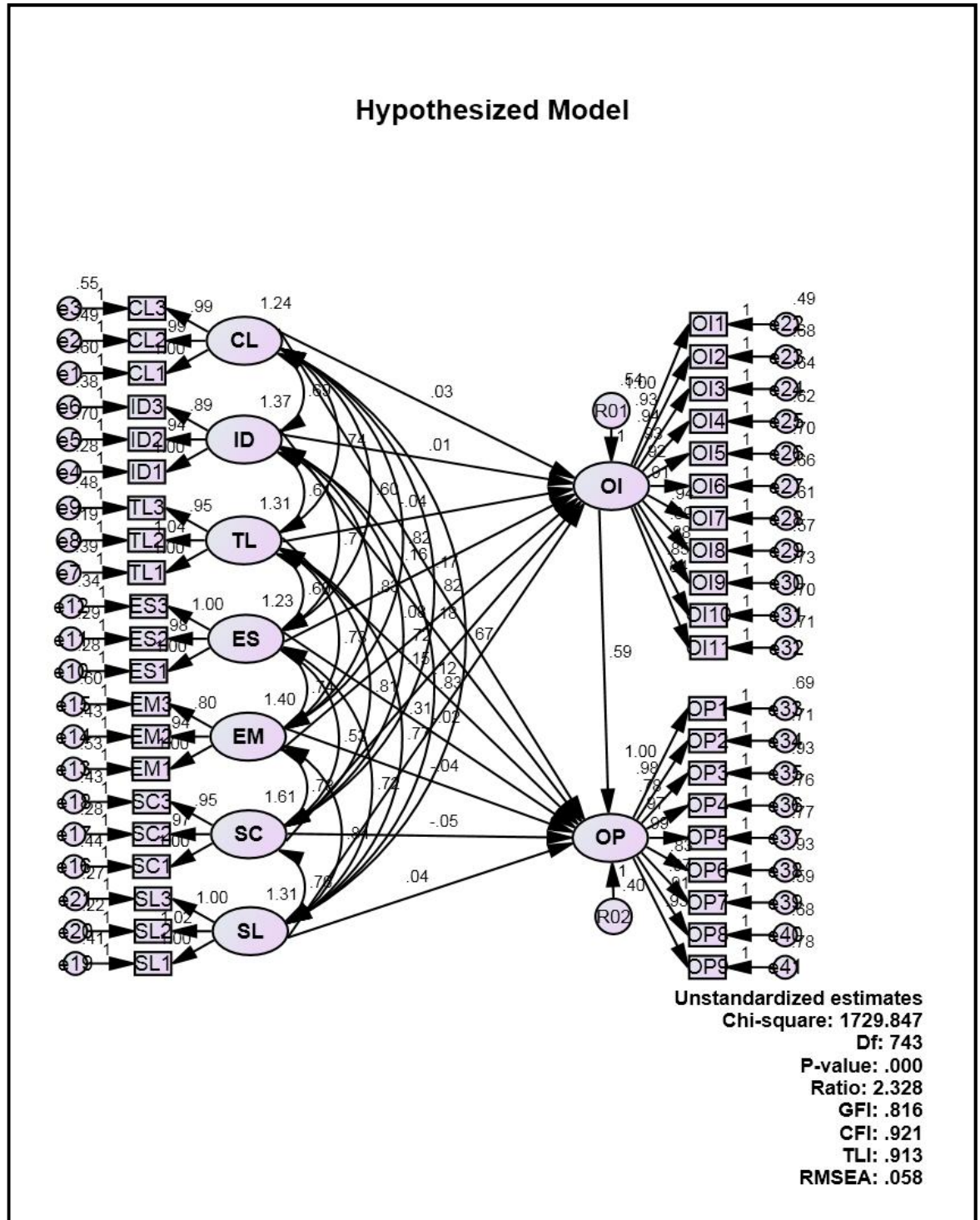


Note: OP=Organizational Performance

Appendix L

Structural Model

Hypothesized Model



Note. CL=Continuous Learning; ID=Inquiry and Dialogue; TL=Team Learning; ES=Embedded System; EM=Empowerment; SC=System Connection; SL=Strategic Leadership; OI=Organizational Innovativeness; OP=Organizational Performance.

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

| | | | Estimate | S.E. | C.R. | P | Label |
|-----|------|----|----------|------|--------|------|--------|
| OI | <--- | CL | .032 | .061 | .518 | .604 | par_62 |
| OI | <--- | ID | .013 | .056 | .228 | .820 | par_63 |
| OI | <--- | TL | -.042 | .054 | -.783 | .433 | par_64 |
| OI | <--- | ES | .165 | .054 | 3.051 | .002 | par_65 |
| OI | <--- | EM | .083 | .060 | 1.388 | .165 | par_66 |
| OI | <--- | SC | .146 | .047 | 3.134 | .002 | par_67 |
| OI | <--- | SL | .305 | .060 | 5.121 | *** | par_68 |
| OP | <--- | CL | .168 | .057 | 2.958 | .003 | par_54 |
| OP | <--- | TL | .119 | .050 | 2.412 | .016 | par_55 |
| OP | <--- | ID | .178 | .052 | 3.435 | *** | par_56 |
| OP | <--- | ES | -.018 | .050 | -.352 | .725 | par_57 |
| OP | <--- | EM | -.045 | .055 | -.816 | .415 | par_58 |
| OP | <--- | SC | -.047 | .043 | -1.075 | .282 | par_59 |
| OP | <--- | SL | .043 | .056 | .772 | .440 | par_60 |
| OP | <--- | OI | .591 | .062 | 9.577 | *** | par_61 |
| CL1 | <--- | CL | 1.000 | | | | |
| CL2 | <--- | CL | .988 | .054 | 18.398 | *** | par_1 |
| CL3 | <--- | CL | .995 | .055 | 18.127 | *** | par_2 |
| ID1 | <--- | ID | 1.000 | | | | |
| ID2 | <--- | ID | .941 | .047 | 20.163 | *** | par_3 |
| ID3 | <--- | ID | .890 | .039 | 22.932 | *** | par_4 |
| TL1 | <--- | TL | 1.000 | | | | |
| TL2 | <--- | TL | 1.042 | .039 | 26.409 | *** | par_5 |
| TL3 | <--- | TL | .952 | .043 | 22.255 | *** | par_6 |
| ES1 | <--- | ES | 1.000 | | | | |
| ES2 | <--- | ES | .976 | .038 | 25.858 | *** | par_7 |
| ES3 | <--- | ES | .998 | .039 | 25.335 | *** | par_8 |
| EM1 | <--- | EM | 1.000 | | | | |
| EM2 | <--- | EM | .936 | .047 | 19.796 | *** | par_9 |
| EM3 | <--- | EM | .798 | .046 | 17.303 | *** | par_10 |
| SC1 | <--- | SC | 1.000 | | | | |
| SC2 | <--- | SC | .971 | .037 | 26.293 | *** | par_11 |
| SC3 | <--- | SC | .951 | .039 | 24.373 | *** | par_12 |
| SL1 | <--- | SL | 1.000 | | | | |
| SL2 | <--- | SL | 1.020 | .038 | 26.698 | *** | par_13 |
| SL3 | <--- | SL | 1.000 | .039 | 25.909 | *** | par_14 |
| OI1 | <--- | OI | 1.000 | | | | |

| | | | Estimate | S.E. | C.R. | P | Label |
|------|------|----|----------|------|--------|-----|--------|
| OI2 | <--- | OI | .928 | .055 | 16.758 | *** | par_15 |
| OI3 | <--- | OI | .937 | .054 | 17.192 | *** | par_16 |
| OI4 | <--- | OI | .928 | .054 | 17.200 | *** | par_17 |
| OI5 | <--- | OI | .925 | .056 | 16.585 | *** | par_18 |
| OI6 | <--- | OI | .914 | .054 | 16.780 | *** | par_19 |
| OI7 | <--- | OI | .945 | .054 | 17.511 | *** | par_20 |
| OI8 | <--- | OI | .890 | .052 | 17.250 | *** | par_21 |
| OI9 | <--- | OI | .881 | .055 | 15.873 | *** | par_22 |
| OI10 | <--- | OI | .847 | .054 | 15.710 | *** | par_23 |
| OI11 | <--- | OI | .838 | .054 | 15.545 | *** | par_24 |
| OP1 | <--- | OP | 1.000 | | | | |
| OP2 | <--- | OP | .976 | .058 | 16.879 | *** | par_25 |
| OP3 | <--- | OP | .780 | .057 | 13.638 | *** | par_26 |
| OP4 | <--- | OP | .970 | .059 | 16.556 | *** | par_27 |
| OP5 | <--- | OP | .988 | .059 | 16.648 | *** | par_28 |
| OP6 | <--- | OP | .832 | .058 | 14.249 | *** | par_29 |
| OP7 | <--- | OP | .968 | .055 | 17.553 | *** | par_30 |
| OP8 | <--- | OP | .906 | .055 | 16.427 | *** | par_31 |
| OP9 | <--- | OP | .930 | .058 | 16.052 | *** | par_32 |

Standardized Regression Weights: (Group number 1 - Default model)

| | | | Estimate |
|-----|------|----|----------|
| OI | <--- | CL | .035 |
| OI | <--- | ID | .015 |
| OI | <--- | TL | -.048 |
| OI | <--- | ES | .183 |
| OI | <--- | EM | .098 |
| OI | <--- | SC | .186 |
| OI | <--- | SL | .351 |
| OP | <--- | CL | .175 |
| OP | <--- | TL | .128 |
| OP | <--- | ID | .195 |
| OP | <--- | ES | -.018 |
| OP | <--- | EM | -.049 |
| OP | <--- | SC | -.055 |
| OP | <--- | SL | .046 |
| OP | <--- | OI | .551 |
| CL1 | <--- | CL | .821 |
| CL2 | <--- | CL | .843 |
| CL3 | <--- | CL | .832 |
| ID1 | <--- | ID | .912 |

| | Estimate |
|--------------|----------|
| ID2 <--- ID | .797 |
| ID3 <--- ID | .861 |
| TL1 <--- TL | .877 |
| TL2 <--- TL | .939 |
| TL3 <--- TL | .844 |
| ES1 <--- ES | .901 |
| ES2 <--- ES | .896 |
| ES3 <--- ES | .886 |
| EM1 <--- EM | .852 |
| EM2 <--- EM | .861 |
| EM3 <--- EM | .773 |
| SC1 <--- SC | .887 |
| SC2 <--- SC | .918 |
| SC3 <--- SC | .878 |
| SL1 <--- SL | .873 |
| SL2 <--- SL | .927 |
| SL3 <--- SL | .912 |
| OI1 <--- OI | .817 |
| OI2 <--- OI | .746 |
| OI3 <--- OI | .760 |
| OI4 <--- OI | .761 |
| OI5 <--- OI | .741 |
| OI6 <--- OI | .747 |
| OI7 <--- OI | .771 |
| OI8 <--- OI | .762 |
| OI9 <--- OI | .717 |
| OI10 <--- OI | .711 |
| OI11 <--- OI | .706 |
| OP1 <--- OP | .789 |
| OP2 <--- OP | .779 |
| OP3 <--- OP | .655 |
| OP4 <--- OP | .767 |
| OP5 <--- OP | .770 |
| OP6 <--- OP | .679 |
| OP7 <--- OP | .802 |
| OP8 <--- OP | .762 |
| OP9 <--- OP | .748 |

Covariances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|------------|----------|------|-------|-----|--------|
| CL <--> ID | .688 | .086 | 7.993 | *** | par_33 |
| CL <--> TL | .743 | .087 | 8.553 | *** | par_34 |
| CL <--> ES | .601 | .080 | 7.537 | *** | par_35 |
| CL <--> EM | .817 | .094 | 8.702 | *** | par_36 |
| CL <--> SC | .820 | .096 | 8.548 | *** | par_37 |
| CL <--> SL | .668 | .084 | 7.944 | *** | par_38 |
| ID <--> TL | .612 | .082 | 7.425 | *** | par_39 |
| ID <--> ES | .769 | .085 | 9.096 | *** | par_40 |
| ID <--> EM | .830 | .093 | 8.879 | *** | par_41 |
| ID <--> SC | .722 | .092 | 7.810 | *** | par_42 |
| ID <--> SL | .831 | .089 | 9.335 | *** | par_43 |
| TL <--> ES | .597 | .078 | 7.621 | *** | par_44 |
| TL <--> EM | .733 | .089 | 8.223 | *** | par_45 |
| TL <--> SC | .808 | .094 | 8.624 | *** | par_46 |
| TL <--> SL | .770 | .086 | 8.939 | *** | par_47 |
| ES <--> EM | .738 | .087 | 8.501 | *** | par_48 |
| ES <--> SC | .534 | .083 | 6.395 | *** | par_49 |
| ES <--> SL | .725 | .082 | 8.820 | *** | par_50 |
| EM <--> SC | .733 | .096 | 7.628 | *** | par_51 |
| EM <--> SL | .840 | .093 | 9.048 | *** | par_52 |
| SC <--> SL | .760 | .092 | 8.251 | *** | par_53 |

Correlations: (Group number 1 - Default model)

| | Estimate |
|------------|----------|
| CL <--> ID | .528 |
| CL <--> TL | .583 |
| CL <--> ES | .486 |
| CL <--> EM | .620 |
| CL <--> SC | .580 |
| CL <--> SL | .523 |
| ID <--> TL | .457 |
| ID <--> ES | .592 |
| ID <--> EM | .600 |
| ID <--> SC | .486 |
| ID <--> SL | .620 |
| TL <--> ES | .470 |
| TL <--> EM | .542 |
| TL <--> SC | .557 |
| TL <--> SL | .587 |
| ES <--> EM | .562 |

| | Estimate |
|------------|----------|
| ES <--> SC | .379 |
| ES <--> SL | .570 |
| EM <--> SC | .488 |
| EM <--> SL | .619 |
| SC <--> SL | .522 |

Variances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|-----|----------|------|--------|-----|---------|
| CL | 1.243 | .131 | 9.463 | *** | par_69 |
| ID | 1.368 | .121 | 11.308 | *** | par_70 |
| TL | 1.309 | .122 | 10.765 | *** | par_71 |
| ES | 1.232 | .109 | 11.263 | *** | par_72 |
| EM | 1.399 | .140 | 10.015 | *** | par_73 |
| SC | 1.611 | .147 | 10.986 | *** | par_74 |
| SL | 1.314 | .122 | 10.762 | *** | par_75 |
| R01 | .545 | .059 | 9.291 | *** | par_76 |
| R02 | .398 | .049 | 8.185 | *** | par_77 |
| e1 | .602 | .060 | 10.113 | *** | par_78 |
| e2 | .493 | .053 | 9.355 | *** | par_79 |
| e3 | .548 | .056 | 9.765 | *** | par_80 |
| e4 | .278 | .040 | 7.007 | *** | par_81 |
| e5 | .698 | .061 | 11.531 | *** | par_82 |
| e6 | .379 | .039 | 9.700 | *** | par_83 |
| e7 | .395 | .039 | 10.070 | *** | par_84 |
| e8 | .192 | .032 | 6.096 | *** | par_85 |
| e9 | .479 | .043 | 11.212 | *** | par_86 |
| e10 | .285 | .032 | 8.902 | *** | par_87 |
| e11 | .290 | .031 | 9.223 | *** | par_88 |
| e12 | .337 | .035 | 9.723 | *** | par_89 |
| e13 | .528 | .058 | 9.090 | *** | par_90 |
| e14 | .426 | .049 | 8.703 | *** | par_91 |
| e15 | .601 | .053 | 11.333 | *** | par_92 |
| e16 | .436 | .045 | 9.693 | *** | par_93 |
| e17 | .284 | .036 | 7.853 | *** | par_94 |
| e18 | .431 | .043 | 10.098 | *** | par_95 |
| e19 | .412 | .038 | 10.961 | *** | par_96 |
| e20 | .222 | .028 | 8.040 | *** | par_97 |
| e21 | .265 | .029 | 9.119 | *** | par_98 |
| e22 | .494 | .041 | 12.201 | *** | par_99 |
| e23 | .682 | .053 | 12.871 | *** | par_100 |
| e24 | .637 | .050 | 12.771 | *** | par_101 |

| | Estimate | S.E. | C.R. | P | Label |
|-----|----------|------|--------|-----|---------|
| e25 | .624 | .049 | 12.769 | *** | par_102 |
| e26 | .700 | .054 | 12.909 | *** | par_103 |
| e27 | .658 | .051 | 12.866 | *** | par_104 |
| e28 | .608 | .048 | 12.691 | *** | par_105 |
| e29 | .568 | .045 | 12.757 | *** | par_106 |
| e30 | .730 | .056 | 13.049 | *** | par_107 |
| e31 | .697 | .053 | 13.078 | *** | par_108 |
| e32 | .705 | .054 | 13.107 | *** | par_109 |
| e33 | .694 | .056 | 12.298 | *** | par_110 |
| e34 | .710 | .057 | 12.416 | *** | par_111 |
| e35 | .930 | .070 | 13.221 | *** | par_112 |
| e36 | .757 | .060 | 12.530 | *** | par_113 |
| e37 | .769 | .062 | 12.498 | *** | par_114 |
| e38 | .927 | .071 | 13.113 | *** | par_115 |
| e39 | .595 | .049 | 12.139 | *** | par_116 |
| e40 | .680 | .054 | 12.572 | *** | par_117 |
| e41 | .779 | .061 | 12.688 | *** | par_118 |

Squared Multiple Correlations: (Group number 1 - Default model)

| | Estimate |
|------|----------|
| OI | .453 |
| OP | .653 |
| OP9 | .560 |
| OP8 | .581 |
| OP7 | .644 |
| OP6 | .461 |
| OP5 | .593 |
| OP4 | .588 |
| OP3 | .429 |
| OP2 | .606 |
| OP1 | .623 |
| OI11 | .498 |
| OI10 | .506 |
| OI9 | .514 |
| OI8 | .581 |
| OI7 | .594 |
| OI6 | .558 |
| OI5 | .549 |
| OI4 | .579 |
| OI3 | .578 |
| OI2 | .557 |

| | Estimate |
|-----|----------|
| OI1 | .668 |
| SL3 | .832 |
| SL2 | .860 |
| SL1 | .761 |
| SC3 | .772 |
| SC2 | .843 |
| SC1 | .787 |
| EM3 | .597 |
| EM2 | .742 |
| EM1 | .726 |
| ES3 | .784 |
| ES2 | .802 |
| ES1 | .812 |
| TL3 | .712 |
| TL2 | .881 |
| TL1 | .768 |
| ID3 | .741 |
| ID2 | .634 |
| ID1 | .831 |
| CL3 | .692 |
| CL2 | .711 |
| CL1 | .674 |

Model Fit Summary

CMIN

| Model | NPAR | CMIN | DF | P | CMIN/DF |
|--------------------|------|-----------|-----|------|---------|
| Default model | 118 | 1729.847 | 743 | .000 | 2.328 |
| Saturated model | 861 | .000 | 0 | | |
| Independence model | 41 | 13303.710 | 820 | .000 | 16.224 |

RMR, GFI

| Model | RMR | GFI | AGFI | PGFI |
|--------------------|------|-------|------|------|
| Default model | .074 | .816 | .787 | .704 |
| Saturated model | .000 | 1.000 | | |
| Independence model | .667 | .127 | .083 | .121 |

Baseline Comparisons

| Model | NFI Delta1 | RFI rho1 | IFI Delta2 | TLI rho2 | CFI |
|--------------------|---------------|-------------|---------------|-------------|-------|
| Default model | .870 | .856 | .921 | .913 | .921 |
| Saturated model | 1.000 | | 1.000 | | 1.000 |
| Independence model | .000 | .000 | .000 | .000 | .000 |

Parsimony-Adjusted Measures

| Model | PRATIO | PNFI | PCFI |
|--------------------|--------|------|------|
| Default model | .906 | .788 | .834 |
| Saturated model | .000 | .000 | .000 |
| Independence model | 1.000 | .000 | .000 |

NCP

| Model | NCP | LO 90 | HI 90 |
|--------------------|-----------|-----------|-----------|
| Default model | 986.847 | 869.407 | 1111.969 |
| Saturated model | .000 | .000 | .000 |
| Independence model | 12483.710 | 12113.377 | 12860.458 |

FMIN

| Model | FMIN | F0 | LO 90 | HI 90 |
|--------------------|--------|--------|--------|--------|
| Default model | 4.424 | 2.524 | 2.224 | 2.844 |
| Saturated model | .000 | .000 | .000 | .000 |
| Independence model | 34.025 | 31.928 | 30.981 | 32.891 |

RMSEA

| Model | RMSEA | LO 90 | HI 90 | PCLOSE |
|--------------------|-------|-------|-------|--------|
| Default model | .058 | .055 | .062 | .000 |
| Independence model | .197 | .194 | .200 | .000 |

AIC

| Model | AIC | BCC | BIC | CAIC |
|--------------------|-----------|-----------|-----------|-----------|
| Default model | 1965.847 | 1994.249 | 2434.456 | 2552.456 |
| Saturated model | 1722.000 | 1929.232 | 5141.256 | 6002.256 |
| Independence model | 13385.710 | 13395.579 | 13548.532 | 13589.532 |

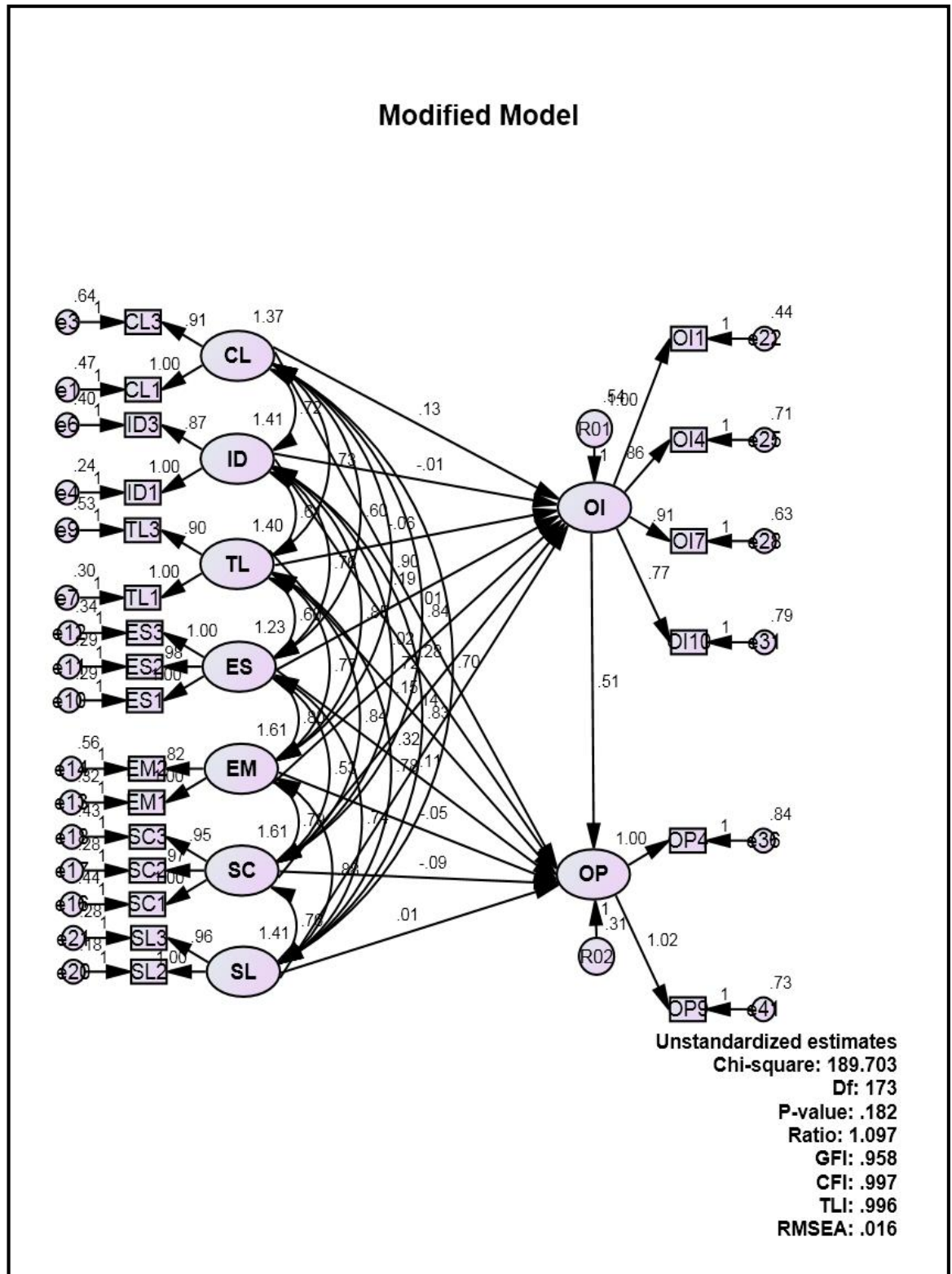
ECVI

| Model | ECVI | LO 90 | HI 90 | MECVI |
|--------------------|--------|--------|--------|--------|
| Default model | 5.028 | 4.727 | 5.348 | 5.100 |
| Saturated model | 4.404 | 4.404 | 4.404 | 4.934 |
| Independence model | 34.235 | 33.287 | 35.198 | 34.260 |

HOELTER

| Model | HOELTER .05 | HOELTER .01 |
|--------------------|----------------|----------------|
| Default model | 183 | 189 |
| Independence model | 27 | 27 |

Modified Model



Note. CL=Continuous Learning; ID=Inquiry and Dialogue; TL=Team Learning; ES=Embedded System; EM=Empowerment; SC=System Connection; SL=Strategic Leadership; OI=Organizational Innovativeness; OP=Organizational Performance.

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

| | | | Estimate | S.E. | C.R. | P | Label |
|------|------|----|----------|------|--------|------|--------|
| OI | <--- | CL | .128 | .064 | 1.997 | .046 | par_35 |
| OI | <--- | ID | -.010 | .059 | -.177 | .859 | par_36 |
| OI | <--- | TL | -.061 | .058 | -1.061 | .289 | par_37 |
| OI | <--- | ES | .185 | .059 | 3.122 | .002 | par_38 |
| OI | <--- | EM | .024 | .059 | .409 | .683 | par_39 |
| OI | <--- | SC | .155 | .051 | 3.011 | .003 | par_40 |
| OI | <--- | SL | .318 | .061 | 5.253 | *** | par_41 |
| OP | <--- | CL | .007 | .065 | .104 | .918 | par_42 |
| OP | <--- | ID | .284 | .061 | 4.615 | *** | par_43 |
| OP | <--- | TL | .142 | .059 | 2.421 | .015 | par_44 |
| OP | <--- | ES | .112 | .061 | 1.827 | .068 | par_45 |
| OP | <--- | EM | -.053 | .059 | -.892 | .372 | par_46 |
| OP | <--- | SC | -.090 | .053 | -1.703 | .089 | par_47 |
| OP | <--- | SL | .010 | .064 | .155 | .877 | par_48 |
| OP | <--- | OI | .509 | .077 | 6.641 | *** | par_49 |
| CL1 | <--- | CL | 1.000 | | | | |
| CL3 | <--- | CL | .911 | .063 | 14.465 | *** | par_1 |
| ID1 | <--- | ID | 1.000 | | | | |
| ID3 | <--- | ID | .870 | .045 | 19.279 | *** | par_2 |
| TL1 | <--- | TL | 1.000 | | | | |
| TL3 | <--- | TL | .900 | .056 | 15.999 | *** | par_3 |
| ES1 | <--- | ES | 1.000 | | | | |
| ES2 | <--- | ES | .977 | .038 | 25.852 | *** | par_4 |
| ES3 | <--- | ES | 1.000 | .039 | 25.344 | *** | par_5 |
| EM1 | <--- | EM | 1.000 | | | | |
| EM2 | <--- | EM | .822 | .049 | 16.716 | *** | par_6 |
| SC1 | <--- | SC | 1.000 | | | | |
| SC2 | <--- | SC | .973 | .037 | 26.250 | *** | par_7 |
| SC3 | <--- | SC | .953 | .039 | 24.322 | *** | par_8 |
| SL2 | <--- | SL | 1.000 | | | | |
| SL3 | <--- | SL | .960 | .038 | 25.116 | *** | par_9 |
| OI1 | <--- | OI | 1.000 | | | | |
| OI4 | <--- | OI | .859 | .057 | 15.155 | *** | par_10 |
| OI7 | <--- | OI | .906 | .056 | 16.081 | *** | par_11 |
| OI10 | <--- | OI | .767 | .056 | 13.594 | *** | par_12 |
| OP4 | <--- | OP | 1.000 | | | | |
| OP9 | <--- | OP | 1.023 | .080 | 12.753 | *** | par_13 |

Standardized Regression Weights: (Group number 1 - Default model)

| | Estimate |
|--------------|----------|
| OI <--- CL | .147 |
| OI <--- ID | -.012 |
| OI <--- TL | -.071 |
| OI <--- ES | .200 |
| OI <--- EM | .030 |
| OI <--- SC | .192 |
| OI <--- SL | .368 |
| OP <--- CL | .008 |
| OP <--- ID | .337 |
| OP <--- TL | .169 |
| OP <--- ES | .124 |
| OP <--- EM | -.067 |
| OP <--- SC | -.114 |
| OP <--- SL | .012 |
| OP <--- OI | .523 |
| CL1 <--- CL | .862 |
| CL3 <--- CL | .800 |
| ID1 <--- ID | .925 |
| ID3 <--- ID | .853 |
| TL1 <--- TL | .907 |
| TL3 <--- TL | .825 |
| ES1 <--- ES | .900 |
| ES2 <--- ES | .896 |
| ES3 <--- ES | .886 |
| EM1 <--- EM | .914 |
| EM2 <--- EM | .812 |
| SC1 <--- SC | .886 |
| SC2 <--- SC | .919 |
| SC3 <--- SC | .879 |
| SL2 <--- SL | .942 |
| SL3 <--- SL | .907 |
| OI1 <--- OI | .840 |
| OI4 <--- OI | .723 |
| OI7 <--- OI | .759 |
| OI10 <--- OI | .662 |
| OP4 <--- OP | .737 |
| OP9 <--- OP | .768 |

Covariances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|------------|----------|------|-------|-----|--------|
| CL <--> ID | .719 | .092 | 7.796 | *** | par_14 |
| CL <--> TL | .731 | .094 | 7.798 | *** | par_15 |
| CL <--> ES | .603 | .084 | 7.193 | *** | par_16 |
| CL <--> EM | .897 | .103 | 8.684 | *** | par_17 |
| CL <--> SC | .838 | .100 | 8.343 | *** | par_18 |
| CL <--> SL | .699 | .090 | 7.727 | *** | par_19 |
| ID <--> TL | .606 | .087 | 6.937 | *** | par_20 |
| ID <--> ES | .764 | .085 | 8.958 | *** | par_21 |
| ID <--> EM | .850 | .098 | 8.661 | *** | par_22 |
| ID <--> SC | .717 | .093 | 7.675 | *** | par_23 |
| ID <--> SL | .831 | .091 | 9.166 | *** | par_24 |
| TL <--> ES | .595 | .082 | 7.278 | *** | par_25 |
| TL <--> EM | .770 | .097 | 7.913 | *** | par_26 |
| TL <--> SC | .838 | .098 | 8.543 | *** | par_27 |
| TL <--> SL | .781 | .091 | 8.629 | *** | par_28 |
| ES <--> EM | .795 | .091 | 8.703 | *** | par_29 |
| ES <--> SC | .532 | .083 | 6.390 | *** | par_30 |
| ES <--> SL | .741 | .083 | 8.880 | *** | par_31 |
| EM <--> SC | .789 | .101 | 7.779 | *** | par_32 |
| EM <--> SL | .881 | .098 | 9.023 | *** | par_33 |
| SC <--> SL | .762 | .093 | 8.164 | *** | par_34 |

Correlations: (Group number 1 - Default model)

| | Estimate |
|------------|----------|
| CL <--> ID | .518 |
| CL <--> TL | .528 |
| CL <--> ES | .464 |
| CL <--> EM | .604 |
| CL <--> SC | .564 |
| CL <--> SL | .503 |
| ID <--> TL | .432 |
| ID <--> ES | .581 |
| ID <--> EM | .565 |
| ID <--> SC | .477 |
| ID <--> SL | .590 |
| TL <--> ES | .454 |
| TL <--> EM | .513 |
| TL <--> SC | .559 |
| TL <--> SL | .556 |
| ES <--> EM | .566 |

| | Estimate |
|------------|----------|
| ES <--> SC | .379 |
| ES <--> SL | .563 |
| EM <--> SC | .491 |
| EM <--> SL | .585 |
| SC <--> SL | .507 |

Variances: (Group number 1 - Default model)

| | Estimate | S.E. | C.R. | P | Label |
|-----|----------|------|--------|-----|--------|
| CL | 1.372 | .148 | 9.285 | *** | par_50 |
| ID | 1.407 | .128 | 10.967 | *** | par_51 |
| TL | 1.400 | .138 | 10.130 | *** | par_52 |
| ES | 1.229 | .109 | 11.247 | *** | par_53 |
| EM | 1.608 | .154 | 10.452 | *** | par_54 |
| SC | 1.606 | .147 | 10.958 | *** | par_55 |
| SL | 1.409 | .120 | 11.783 | *** | par_56 |
| R01 | .540 | .064 | 8.474 | *** | par_57 |
| R02 | .307 | .065 | 4.706 | *** | par_58 |
| e1 | .473 | .082 | 5.775 | *** | par_59 |
| e3 | .639 | .077 | 8.301 | *** | par_60 |
| e4 | .239 | .056 | 4.235 | *** | par_61 |
| e6 | .398 | .050 | 8.021 | *** | par_62 |
| e7 | .304 | .072 | 4.212 | *** | par_63 |
| e9 | .532 | .067 | 7.895 | *** | par_64 |
| e10 | .287 | .032 | 8.973 | *** | par_65 |
| e11 | .289 | .031 | 9.221 | *** | par_66 |
| e12 | .335 | .035 | 9.708 | *** | par_67 |
| e13 | .319 | .076 | 4.214 | *** | par_68 |
| e14 | .563 | .063 | 8.903 | *** | par_69 |
| e16 | .441 | .045 | 9.755 | *** | par_70 |
| e17 | .280 | .036 | 7.779 | *** | par_71 |
| e18 | .430 | .043 | 10.082 | *** | par_72 |
| e20 | .180 | .041 | 4.356 | *** | par_73 |
| e21 | .279 | .041 | 6.745 | *** | par_74 |
| e22 | .440 | .049 | 8.940 | *** | par_75 |
| e25 | .707 | .061 | 11.684 | *** | par_76 |
| e28 | .634 | .057 | 11.108 | *** | par_77 |
| e31 | .793 | .064 | 12.364 | *** | par_78 |
| e36 | .839 | .085 | 9.818 | *** | par_79 |
| e41 | .727 | .082 | 8.847 | *** | par_80 |

Squared Multiple Correlations: (Group number 1 - Default model)

| | Estimate |
|------|----------|
| OI | .486 |
| OP | .692 |
| OP9 | .590 |
| OP4 | .543 |
| OI10 | .438 |
| OI7 | .576 |
| OI4 | .523 |
| OI1 | .705 |
| SL3 | .823 |
| SL2 | .887 |
| SC3 | .772 |
| SC2 | .844 |
| SC1 | .785 |
| EM2 | .659 |
| EM1 | .835 |
| ES3 | .786 |
| ES2 | .803 |
| ES1 | .811 |
| TL3 | .680 |
| TL1 | .822 |
| ID3 | .728 |
| ID1 | .855 |
| CL3 | .641 |
| CL1 | .744 |

Model Fit Summary

CMIN

| Model | NPAR | CMIN | DF | P | CMIN/DF |
|--------------------|------|----------|-----|------|---------|
| Default model | 80 | 189.703 | 173 | .182 | 1.097 |
| Saturated model | 253 | .000 | 0 | | |
| Independence model | 22 | 5926.748 | 231 | .000 | 25.657 |

RMR, GFI

| Model | RMR | GFI | AGFI | PGFI |
|--------------------|------|-------|------|------|
| Default model | .039 | .958 | .939 | .655 |
| Saturated model | .000 | 1.000 | | |
| Independence model | .662 | .216 | .141 | .197 |

Baseline Comparisons

| Model | NFI Delta1 | RFI rho1 | IFI Delta2 | TLI rho2 | CFI |
|--------------------|---------------|-------------|---------------|-------------|-------|
| Default model | .968 | .957 | .997 | .996 | .997 |
| Saturated model | 1.000 | | 1.000 | | 1.000 |
| Independence model | .000 | .000 | .000 | .000 | .000 |

Parsimony-Adjusted Measures

| Model | PRATIO | PNFI | PCFI |
|--------------------|--------|------|------|
| Default model | .749 | .725 | .747 |
| Saturated model | .000 | .000 | .000 |
| Independence model | 1.000 | .000 | .000 |

NCP

| Model | NCP | LO 90 | HI 90 |
|--------------------|----------|----------|----------|
| Default model | 16.703 | .000 | 54.341 |
| Saturated model | .000 | .000 | .000 |
| Independence model | 5695.748 | 5448.161 | 5949.697 |

FMIN

| Model | FMIN | F0 | LO 90 | HI 90 |
|--------------------|--------|--------|--------|--------|
| Default model | .485 | .043 | .000 | .139 |
| Saturated model | .000 | .000 | .000 | .000 |
| Independence model | 15.158 | 14.567 | 13.934 | 15.217 |

RMSEA

| Model | RMSEA | LO 90 | HI 90 | PCLOSE |
|--------------------|-------|-------|-------|--------|
| Default model | .016 | .000 | .028 | 1.000 |
| Independence model | .251 | .246 | .257 | .000 |

AIC

| Model | AIC | BCC | BIC | CAIC |
|--------------------|----------|----------|----------|----------|
| Default model | 349.703 | 359.703 | 667.404 | 747.404 |
| Saturated model | 506.000 | 537.625 | 1510.729 | 1763.729 |
| Independence model | 5970.748 | 5973.498 | 6058.116 | 6080.116 |

ECVI

| Model | ECVI | LO 90 | HI 90 | MECVI |
|--------------------|--------|--------|--------|--------|
| Default model | .894 | .852 | .991 | .920 |
| Saturated model | 1.294 | 1.294 | 1.294 | 1.375 |
| Independence model | 15.270 | 14.637 | 15.920 | 15.277 |

HOELTER

| Model | HOELTER .05 | HOELTER .01 |
|--------------------|----------------|----------------|
| Default model | 422 | 452 |
| Independence model | 18 | 19 |